Poster Abstract Book

Fifth Global Symposium on Health Systems Research
October 8\textsuperscript{th} – 12\textsuperscript{th}, 2018
Liverpool, United Kingdom
**Effective coverage of the Mexican health system**

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Background: Progress towards the health-related Sustainable Development Goals will require health systems providing effective coverage: population coverage with services that deliver the expected health benefits. In Mexico, universal health coverage is a national priority, with active efforts to expand public healthcare system access, increase financial protection, and improve quality of care. The Mexican Institute of Social Security (IMSS) provides care to 62 million affiliates (almost half the population) and is working to address continuing challenges such as maternal and child health, as well as the heavy burden of non-communicable diseases. We estimated effective coverage of multiple conditions within IMSS and compare the results by state.

Methods: Calculating effective coverage requires defining the population in need of services, use of services, and quality of care or outcome of those services. We drew from a population-representative health and nutrition survey (ENSANUT) from 2012, and routinely collected medical indicators for performance evaluation within IMSS from 2016. We extracted population estimates for need, use, and quality for health conditions related to SDG 3.
and calculated effective coverage at state and national levels; we weighted conditions by relative contribution to national disease burden to generate a composite effective coverage index.

Results: Five conditions accounting for 25% of disability-adjusted life years lost in Mexico could be assessed: antenatal care, delivery care, childhood diarrhea, cardiovascular disease, and diabetes. Effective coverage at the national level for IMSS affiliates ranged from a low of 25% for childhood diarrhea to a high of 70% for antenatal care. Poor use of healthcare services contributed to low effective coverage of diarrhea and cardiovascular disease, while poor quality predominated for antenatal and delivery care; gaps in access and quality were similar for diabetes care. Performance by state varied less for NCDs than maternal and child conditions due to few high-performing states. Overall, the effective coverage of these five conditions in IMSS is 44%, suggesting that considering both access and quality, IMSS delivers 44% of potential health gains to the population it serves in these areas.

Conclusions: Effective coverage of the population in need is incomplete within IMSS, the largest health care provider in Mexico; gaps in both use and quality of care must be addressed to bolster health outcomes. Routine health system data can provide initial insight into effective coverage of populations in need, although greater standardization is needed to support ongoing assessment of health system performance as a whole.
Maureen Seguin, The London School of Hygiene and Tropical Medicine  
Poster Number: 2

Patient pathways and access to care for cardiovascular diseases in Malaysia and the Philippines: A Scoping Review

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Background: Ensuring healthy lives and well-being, and reducing inequality within and among countries are enshrined in Sustainable Developments Goals (SDGs) 3 and 10 respectively. Informed by these goals, the ‘Responsive and Equitable Health Systems – Partnership on Non-communicable Diseases’ (RESPOND) Study seeks to reduce the burden of Cardiovascular Diseases (CVDs) amongst poor individuals in Malaysia and the Philippines. The aim of this scoping review is to synthesise findings on barriers and enabling factors to effective care for CVDs in Malaysia and the Philippines. The specific objectives are four-fold: (1) synthesise findings examining how patients move through the health care system, (2) summarise the barriers and enabling factors at each stage of the patient pathway, with a focus on supply- and demand-side factors, (3) summarise the evidence on the influence of improved pathways on health outcomes, and (4) summarise strategies to support patient entry, progression, retention in the health system over time, as required to manage their disease.

Methods: A search was conducted on five bibliographic databases (Medline, Embase, Global Health, International Bibliography of the Social Sciences (IBSS), and PsycINFO) on 7 February 2018. This was complemented by extensive grey literature and hand-searching of relevant repositories in Malaysia and the Philippines.

Results and discussion: The main database search yielded 348 results after duplicates were removed. The titles, abstracts, and full texts were screened independently by two authors. The included articles reveal a wide array of complex patient pathways in Malaysia and the Philippines, characterised by usage of Western and traditional approaches to treat CVDs. Barriers to accessing treatment include financial costs, beliefs about the efficacy and safety of long-term treatment, availability of treatment, and beliefs about the relative seriousness of CVDs versus other challenges of daily life.

Conclusion: The diverse findings reported across the articles reflect the variety of contexts from which the samples are drawn and the associated health beliefs and availability of preferred treatment options. Further context-specific exploration is necessary to capture the social and cultural influences on patient health-seeking behaviour for CVDs. Such research initiatives, such as the RESPOND study, directly address the ideals represented by SDGs 3 and 10.
Barriers to inclusive Universal Reproductive HealthCare: qualitative insights from an intervention to integrate post-abortion family planning (PAFP) into routine abortion care in China.

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Background:
Recent years have seen increasing concerns about the rising numbers of abortions in China. Although modern family planning services are widely available, social, economic and political changes have led to multiple exclusions, particularly for young, unmarried people, and rural-to-urban migrants. Post-abortion family planning (PAFP) is an evidence-based strategy to prevent repeat abortion through increasing utilisation of effective modern contraception. This study was conducted as part of the INPAC research project, which aimed to evaluate the effectiveness of integrating PAFP into existing hospital abortion services in urban China. Contraceptive counselling is an important component of PAFP, but there is limited empirical evidence of how counselling is conducted in practice in LMICs, and the implications for its inclusiveness and effectiveness for marginalised social groups.

Methods
We collected data through two qualitative methods in four provinces selected to represent different socio-economic and cultural contexts within China (Guangdong, Chongqing, Henan and Guizhou provinces): first, semi-structured interviews with abortion service users (18), their male partners (11), service providers and service managers (20) at intervention hospitals; second, qualitative observations of group education and individual counselling with service users and their partners at intervention hospitals (12). Analysis was conducted using a thematic framework approach.

Findings
Unequal gendered social norms and relations constrain women’s ability to make ‘evidence based’ choices autonomously or as an equal partner, particularly for young, unmarried women. Young, unmarried and migrant women also face limited choices due to social norms regarding the suitability of specific methods and lack of access to free or reimbursable contraception. For these groups and less educated women and men, both generational and social distance from providers reduces the opportunities for open communication and trust. Whilst most service users and providers perceive the importance of involving male partners in PAFP, some providers are uncertain about how to involve them in practice.

Discussion:
There is a need to develop innovative approaches to effective communication with young, unmarried people, and migrants to ensure that no-one is left behind in developing effective UHC. Alternative approaches to face-to-face counselling may be required, including web or mobile phone based and peer approaches, potentially introducing and linking to such platforms from PAFP services. Including men in counselling without sufficient skills building or reflection on underlying gender inequalities may risk reinforcing unequal decision making. Explicit consideration of youth-friendliness, gendered power dynamics and practical facilitation of male involvement are therefore required in provider training and skills development.
Factors associated with Intention Non-Affiliation to Popular Health Insurance in Mexico

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Background: The Popular Health Insurance (PHI) in Mexico faces a new challenge due to the fact that a large proportion of the population does not request or conclude their re-affiliation process at the end of the three years of coverage, which generates the loss of their affiliation and which in turn contributes to the persistence of the population without a health insurance scheme. Objective: Identify the main factors that influence the intention of the population to not re-affiliate to Popular Health Insurance in Mexico.

Methods: An observational, transversal, analytical study was carried out with the National Health and Nutrition Survey (ENSANUT) 2012 data, that included 20,376 households affiliated to Popular Health Insurance. The intention of re-affiliation was measured and the reasons why the population affiliated to PHI would not re-affiliate. The characteristics of the head of the household and of the dwelling, the availability of resources for health, characteristics of the environment and penetration of the PHI were included as explanatory variables. A multivariate logistic regression model was used to determine the factors associated with the intention of re-affiliation.

Results: The prevalence of the intention not to re-affiliate to PHI at the national level was 3.46% [IC95% 3.06-3.91]. Households located in the richest quintile [ORA 2.42; IC95% 1.53-3.82] and in urban localities [ORA1.45; IC95% 1.07-1.95] are more likely that the head of the household reports the intention of not re-affiliating with PHI. Likewise, the head of the household with the greatest number of years of affiliation to PHI and who have not used the services offered by PHI providers [ORA = 1.26, IC95% 1.09-1.46] were more likely to report no intention to re-affiliate. The main reasons for non-re-affiliation were the shortage of medication (22.6%) and the inadequate personal care of health personnel (17.7%).

Conclusions: The main reasons for non-re-affiliation are related to the organization of health services, this lower satisfaction not only discourages the use of health services but also the continuity of affiliation to PHI. To achieve the goal of providing coverage to 25% of the Mexican population that, according to ENSANUT 2012 still does not have access to health insurance, PHI will have to improve and regulate the quality of the health services it hire and establish strategies to guarantee the medical supplies.
Impact of health insurance coverage and health workforce on seeking behavior of inpatient care in China

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Background: China witnessed upward trend of patients for seeking health care at high-level hospitals. Both health insurance and health workforce can influence the seeking behavior of inpatient care, considering the preference of people to good quality care when price is reduced. There are striking disparities among the three social health insurance (SHI) schemes in financial protection, leading to the variations in the access of health care in China. This study evaluated the impact of health insurance and health workforce on the choice of inpatients care providers among different SHI participants in China.

Methods: This study used two databases to link the individual-level data for the choice of health care providers and the county-level data for health workforce and health insurance. The individual-level data was collected from China National Health Service Survey (NHSS) covering 94 and 156 sample counties (districts), totaled 177501 and 273687 respondents respectively in 2008 and 2013. The county-level data was reported by the health administrative departments of the counties (districts) sampled by NHSS in 2008 and 2013. Multilevel multinomial logistic model was applied to examine the impact of health insurance, health workforce and their interactions on the choice of inpatients care providers. The choice of inpatients care providers was measured by the type of health care institutions visited by inpatients. The health insurance and health workforce were measured by the SHI average reimbursement rate of inpatient services and the number of registered physicians per 1000 populations.

Results: Rising inpatient reimbursement rate in county hospitals increased the probability of visiting county hospitals (RRR=1.17), and the positive impact was larger in areas with higher physician density in county hospitals (RRR=2.76). The impact of inpatient reimbursement rate and physician density in PHCs and county hospitals on the choice of inpatients care providers varied among different SHI participants. Increasing physician density (RRR=1.81) and reimbursement rate (RRR=1.12) in county hospitals increased the probability of inpatient visits in PHCs and county hospitals for Urban and Rural Basic Medical Scheme (URBMS, consolidation of health insurance for urban and rural residents) participants.

Conclusions: The adequate reimbursement design of health insurance needs to be accompanied by the effective allocation of health workforce, to improve the access to health care. The development of health insurance and the investment of health workforce should consider the consolidation of the health insurance schemes so as to improve the equity of access to inpatient services.
**The Lancet Commission on Global Surgery Indicators: a three-year appraisal using a framework of availability, comparability and usefulness**

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**Background**

In 2015, the Lancet Commission on Global Surgery outlined recommendations to improve access to surgery, globally. To measure progress, six indicators were developed: 1) access to timely essential surgery, 2) specialist surgical workforce density, 3) surgical volume, 4) perioperative mortality, and 5 & 6) protection against impoverishing and catastrophic expenditure. Our aim was to compile and evaluate the indicators from all 194 WHO member countries.

**Methods**

We collected data on indicators by contacting governments, professional societies, clinicians and academics, reviewing databases, and searching the published and grey literature. Our timeframe was 2010-2016. Only primary nationwide data were used, modelled data were excluded. Indicators 1, 4, 5 and 6 were computed from primary data. Indicators were assessed using three dimensions – data availability, comparability, and usefulness.

**Results**

Indicator 1: Data on geolocation of hospitals performing surgery were found from 26 countries. One country fell below the commission's target of 80% of the population within 2 hours of a hospital; 14 were at or close to 100%. Indicator 2: 162 countries had complete data on surgical workforce. Median [25th–75th percentile] number of specialist surgical providers per 100,000 was 66 [39–92] in high-income countries (HIC), 13 [4–47] in middle-income countries (MIC), and 0.5 [0.3–1.0] in low-income countries (LIC). At least three different definitions of providers were found. Indicator 3: 72 countries had data on the volume of surgery. Median [25th–75th percentile] number of operations per 100,000 people was 8,613 [5,040–13,381] in HICs, 2,601 [1,683–4,888] in MICs, and 259 [220–312] in LICs. At least four different definitions of number of operations were found. Indicator 4: we found data on number of deaths following operations from 31 countries. However, definitions ranged from deaths in hospital to 30 days post operation, and in some cases no definition was provided. Indicators 5 & 6: we did not find any primary data to inform calculation this indicator.

**Discussion / conclusions**

Whilst surgical workforce and volume had reasonable availability of data, for all others, availability was very limited. Definitions differed widely between sources, limiting comparability. Surgical workforce and volume are simple and capture the intended aspect of surgical care, however other indicators, such as indicator 1, are complex and may not be capturing the intended aspect. Much work remains to achieve reliable and sustainable collection and use of indicators on surgery and anesthesia around the world, particularly in low- and middle-income countries.
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Poster Number: 7

Gaps between antibiotic prescribing practices and international guidelines among women who delivered by caesarean section at a rural hospital in eastern Rwanda

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Background
Antibiotic stewardship remains a big challenge in sub-Saharan Africa where there are limited trainings and compliance processes, and a lack of written guidelines at sites on proper antimicrobial prescriptions. There is paucity of systematic data on current practices relative to international protocols, which recommend all patients getting a prophylactic antibiotic within one hour of incision and only receiving a postoperative antibiotic when indicated. We characterized, perioperative, antibiotic prescriptions to women who delivered by caesarean section at a rural hospital in eastern Rwanda.

Methods: We prospectively collected data on all consenting adult women who delivered by caesarean section between November 2017 and February 2018 at a rural hospital in eastern Rwanda. Data collectors extracted information on the antibiotic administered, indication, dose/frequency/route, time of administration and duration from patient charts. We describe prescribing practices with frequency and percentages, stratified by operative stage.

Results
A total of 332 patient records were reviewed. 255 (76.8%) received a preoperative antibiotic; of these 80 (59.7%) received the antibiotic within one hour of incision. The most common preoperative antibiotics were Ceftriaxone (n=204, 80.0%) and Ampicillin (n=47, 18.4%), prescribed as single therapies. 327 (98.5%) women were given at least one antibiotic post-operatively; one was prescribed because of a surgical site infection but the remaining were indicated as prophylactic antibiotics. Of those receiving a postoperative antibiotic, 325 (99.4%) received Ampicillin. 322 (98.5%) received a second antibiotic, most commonly gentamycin (n=317, 98.5%). Eight (2.4%) received three antibiotics.

At discharge, 85 (26.3%) of the 332 patients were not prescribed additional antibiotics. Of the remaining 247, 169 (52.3%) were prescribed Amoxicillin; 64 (19.8%) Cloxacillin; 3 (0.9%) Ampicillin; and 2 (0.6%) Gentamycin. Ten patients were prescribed a second antibiotic upon discharge, nine of whom received Metronidazole.

Conclusion: Our data suggest large deviations in antibiotics prescription practices among women who delivered by caesarean section compared to international protocols. A better understanding of the rationale of prescription habits and the effect of over-prescription on infection prevention and antibiotic resistance is required towards establishing a robust antibiotic prescription practice.
Differentiated models of decentralised care following implementation of national policy to manage drug-resistant tuberculosis in South Africa: a health systems evaluation using pathways of care

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Background

South Africa is among the first countries to introduce a national policy to decentralise management of drug-resistant tuberculosis (DR-TB), with the aim of shifting core DR-TB service delivery from specialised tertiary-level TB hospitals towards first level hospitals and primary health care (PHC) clinics. The decentralisation required significant changes in ‘hardwares’ and ‘softwares’ of the health system to promote access and quality of DR-TB services. We therefore conducted a triangulated evaluation of health system aspects to assess the extent and success of decentralising DR-TB management.

Methods

The study was conducted in three provinces with high burden of DR-TB. The national health laboratory service data was used to locate facilities from which laboratory samples were collected for individuals diagnosed with DR-TB, for 65 randomly-sampled persons per province. Locations and dates of samples were used to approximate pathways of care for individuals using GIS mapping, dominant pathways were identified and used to identify models of decentralised care. GIS maps were used to identify ‘hubs’ of high-level activity within units of decentralised care. Facility visits and interviews with managers and health workers were conducted at 13 hubs to validate models, supplemented with record-reviews to validate patient pathways of care.

Results

With a dataset of 195 patients, we established that all provinces have decentralised DR-TB services, but showed varying levels and types of decentralisation. A single unit of decentralisation involved ‘tertiary-district-PHC’ facilities, with involvement of secondary-level hospitals. In two provinces, DR-TB services were concentrated at the district-level hospital, and in one province at PHC-level. DR-TB management varied at each level of care depending, not only on the devolution of service package, but also expertise. District-level services across provinces ranged from dedicated DR-TB hospitals and DR-TB units to DR-TB clinics and nurse-run weekly services. Patient movement was driven largely by clinical expertise, but prescriptions could be done remotely. The success of decentralisation depended mostly on the expertise and investment by facility staff, and support by managers.

Conclusions

As an intervention, decentralisation of DR-TB has been implemented in all provinces and districts evaluated. However, the devolution of DR-TB services along the levels of care varies between provinces, constrained largely by clinical expertise, with better-resourced provinces having decentralised more successfully to PHC facilities. Variations also exist between facilities at the same level of care, depending largely on the investment of staff. Decentralised models of DR-TB are differentiated largely on the basis of expertise, and commitment of staff.
When health system is barrier to safe healthcare: challenges of managing superbugs in Latvia

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Background: Antibiotic resistant pathogens, often called superbugs, are one of the biggest threats to global health, food security, and sustainable development today. Although the burden of the problem falls heavier on developing countries, there is limited evidence how emerging crisis of antibiotic resistance is managed in developing contexts. Latvia exemplifies the obstacles faced in committing to tackle antimicrobial resistance and delivering qualitative and safe healthcare in the context of universal health coverage.

Methods: Based on ethnographic fieldwork in 2017-2018, the presentation focuses on daily challenges in managing antibiotic resistant pathogens in hospital settings in Latvia. The ethnographic study employed interviews with patients, hospital staff, policy makers, state officials, and NGO representatives and observations in public, policy, and healthcare settings.

Results: The emergence of superbugs and attempts to control this public health problem reveal major failings in the Latvian health system and in pathways to safe and qualitative healthcare delivery. A system, in which instability is normalized as a constant state of affairs and fragmentation and health inequalities are deepening, produces an environment where not only groups of vulnerable patients but the whole medical field can struggle to become ‘visible’ and thus knowable to the health system. However, amidst these uncertainties within the health system, health professionals employ rather creative strategies to navigate systematic, resource, treatment challenges when managing superbugs in Latvian context.

Conclusions: Efforts to tackle global crisis of antimicrobial resistance and improve safety and quality of healthcare for all, need to take into consideration the complex local realities and unintended consequences that health systems can create for their users. The development of ethnographic understanding has a high potential to entangle deeply-rooted disconnections between intentions and (unintended) consequences of health systems.
Is “Health for All” synonymous with “Antibiotics for All”: Changes in rational antibiotic use in a Performance-based Financing pilot in Zanzibar

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Communicable diseases are still responsible for over half deaths in Sub-Saharan Africa countries. Health for All promotes prompt access to diagnosis and treatment for everyone including treatment with antibiotics for bacterial infections. However, increasing resistance of bacteria to available antimicrobials is a growing global health concern. Several factors have been identified as contributing to increased resistance to low cost antibiotics such as over use of antimicrobials in animal husbandry and agriculture as well as spread of infections (within and outside the hospital setting). However the overuse of antibiotics by prescribers at the Primary Care level is considered one of the key drivers of antibiotic resistance in low income countries. This begs the question whether health for all, in situation where antibiotics are liberally prescribed, and therefore available in the community, drives the upward trend of antibiotic resistance.

To respond to this concern the results of the Performance-Based Financing pilot in Zanzibar are presented. Performance-Based Financing was piloted in two districts (31 health centres) from July 2013- June 2016, introducing a fee for selected services paid at health facility level. The focus from the design phase onwards was quality of care. Direct quality indicators were included in nine out of 18 services selected for payment. Treatment according to national guidelines (Integrated Management of Childhood Illnesses for under-fives) was one of these ‘direct quality’ indicators. The quality assessment, intended to adjust the quarterly payments, included an indicator on rational use of antibiotics.

An evaluation following four years of implementation showed that treatment according to guidelines increased 63.9 percentage points in pilot districts compared with 9.3 percentage points in other districts. Treatment of patients with antibiotics that were not in accordance with the guidelines decreased from 33% to 6% in the pilot districts compared with 24% to 21% in non-pilot districts. The overall decrease in the prescription of antibiotics was more marked in the first twelve months at 28% than in the final year of the pilot (13%). The change was minimal (1%) in non-pilot districts.

Conclusion: Prescriptions of antibiotics that are not in line with treatment guidelines at Primary Care level can be reduced through the introduction of quality indicators in a Performance-Based Financing reform. Attention to changes in prescribing habits would be required to produce lasting results.
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Poster Number: 11

Power, influence and antimicrobial resistance policy-making in Pakistan

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Background:
Antimicrobial resistance (AMR) is a pressing public health problem requiring solutions spanning the human, animal and environmental sectors. It is well recognised that inappropriate use of antibiotics is a key driver of AMR. Pakistan has been amongst the first of the low and middle-income countries (LMICs) to embrace the challenge posed by AMR, including volunteering early for a joint external evaluation (JEE) of its compliance with international health regulations, and is currently navigating complexities of policy setting and implementation. Our research aimed to identify actor power in policy processes relating to use of antibiotics in Pakistan, and to understand the sources of this power.

Methods: We conducted interviews with 48 elite policymakers, including senior doctors, vets, government officials (human and animal sector), politicians, the pharmaceutical industry (domestic and international), and non-profit organisations, using a snowballing process and ‘thinking aloud’ exercise. Interviews were conducted at national and regional levels in Pakistan throughout 2017. We conducted a network analysis to investigate connections between policymakers, and a thematic analysis to understand sources of actor power and their influence on the policy process.

Results: Interviewees perceived three distinct groups to be most powerful: politicians, the pharmaceutical industry, and the poultry industry. Relations among these groups are complex, with many interviewees mentioning vested interests of politicians affecting potential policies that could be introduced to address the behaviour of the other groups. Power and influence were associated with an individual’s personal connections to powerful politicians, rather than their role or professional position. Intersecting this complex web of personal relationships, the power of the pharmaceutical industry over the medical profession was cited frequently as a driver of AMR in Pakistan. Doctors were perceived to be under the influence of pharmaceutical companies in promoting the use of unnecessary antibiotics for financial gain. In addition, networks between the poultry industry - which was reported to be well organised with a strong governing and lobbying body - and politicians was identified as an obstacle to reducing antibiotic use in food production.

Discussion:
Reducing inappropriate use antibiotics in Pakistan is complicated by hidden vested interests, particularly around links between doctors, politicians and the pharmaceutical and poultry industries. Our study, which should be replicated in other settings, indicates that implementation of new policies to mitigate AMR in LMICs will require navigation of connections and motivations of powerful policy actors.
What is the effect of facility and maternal characteristics on antibiotic prescription in public maternity units? Results from Madhya Pradesh India

Background: Peripartum infections account for 10-20% of global maternal deaths. As institutional delivery and access to skilled birth attendance and emergency obstetric care (EmOC) increases, global actors in maternal health have highlighted their growing concern regarding poor facility standards of water, sanitation and hygiene (WASH) and infection prevention. Maternal health suffers further where poor WASH standards and infection prevention intersects with high antibiotic use.

Aim: To assess antibiotic prescription and facility infrastructure in public maternity units in three districts in Madhya Pradesh state, in Central India. Further, to quantify the association between maternal and facility-based characteristics and maternal antibiotic prescription.

Methods: Sociodemographic and obstetric characteristics of postnatal mothers (n=916) were collected in a 5-day cross-sectional survey during facility reviews (n=56). Maternal and facility characteristics were assessed and analyzed in a multilevel logistic regression model for maternal antibiotic prescription.

Results: Overall, maternity units did not meet minimum facility requirements regarding WASH and antibiotic use is high across the sample, with 77% of mothers receiving an antibiotic during the peripartum period. However, in an adjusted multilevel model, neither obstetric nor individual characteristics of mothers predicted antibiotic use, and of facility characteristics, only facility district was significant, (p<0.05). 65% of the variation in the prevalence of antibiotic use in mothers is attributable to the facility that she gave birth in. The non-significance of EmOC, WASH, and structural facility factors, paired with the high residual heterogeneity (Median Odds Ratio=10.7) of the facility-grouping variable in the adjusted model indicates that unmeasured differences between individual facilities are the strongest predictors of maternal antibiotic use.

Conclusion: This study demonstrates that in this context, antibiotic use is largely determined by differences between facilities rather than specific maternal characteristics and WASH-related or structural capabilities of facilities. Due to the high level of unexplained variance that remains, it is likely that other factors which exist within facilities may have a greater influence on antibiotic prescription practices. The culture of prescribing within a facility may be influenced by clinician training/knowledge, the weighing of risk/benefit, perceptions regarding the mother, and even patient demand for antibiotics. In the context of the sustainable development goals and the growing problem of antimicrobial resistance, the strong influence of facility-level differences indicates that the focus of future interventions to increase infection prevention and decrease inappropriate antibiotic prescription should be approached within individual maternity units.
Background: Achieving the sustainable development goals (SDGs) while facing a shortage of health workers remains one of the greatest challenges affecting the health system of Sudan. As the sole national mandated body to produce medical and health specialists, the Sudan Medical Specialisation Board (SMSB) has as a priority to address the national post-graduate professional training gap. With over 40 specialised councils, the SMSB acts as a pipeline for over 4,000 residents, awarding medical doctorates, fellowships, and postgraduate diplomas. The residents of the SMSB form the bulk of the country's health system, graduating to become mid-level managers, health care providers and health professional educators. Through a generous grant from ESTHER Ireland a successful partnership was forged between the Centre for Global Health (CGH), Trinity College Dublin and the SMSB, with a common goal to enhance health system strengthening through SDG Goal 17.

Methods: Needs assessment workshops, prioritisation exercises, and the development of an action plan were developed using participatory approaches.

Results A partnership agreement in the form of an MOU was signed between both institutes. Identified areas for collaboration focused on the post-graduate programmes offered at the SMSB (i.e. the Medical Doctorate) and CGH (the MSc Global Health) and included: enhancing and maintaining research rigour, revisiting thesis guidelines, offering mutual exchanges and research opportunities, and strengthening supervision systems. In addition, the partnership resolved to enhance further collaboration and transfer of knowledge through strengthening communication platforms, forming joint symposiums, and establishing methodological working groups for students.

Discussion/conclusions The partnership allowed for the fostering of new ideas, innovative approaches, interdisciplinary and multidisciplinary collaboration through the involvement and commitment of both partners. A strong partnership foundation was established, allowing for further cross-cultural exchanges of expertise and opening new opportunities for health systems strengthening through post-graduate training.
Following the Knowledge Trail: How is Health Knowledge Used in Low-Income Countries after Participant Exposure to Global Conferences?


Background: Insufficient use of research evidence for health policy and practice is a challenge that affects quality of care and ultimately health outcomes, particularly for the most vulnerable populations in low-income countries. Global health organizations employ a number of strategies to disseminate knowledge of evidence-based practices broadly, such as hosting global conferences. Little research has been done to explore the trail of knowledge from conference exposure to participants’ local context and whether knowledge affects health practice and policy.

Methods: Mixed methods were employed to collect data on conference knowledge use and sharing from participants of regional and global maternal and newborn health conferences held in 2012 (Bangladesh), 2013 (South Africa), and 2015 (Mexico). All conference participants (411 in 2012, 436 in 2013, and 1000 in 2015) were invited to complete an on-line survey. Of those invited, 148 from 22 countries (2012), 126 from 33 countries (2013), and 324 from 56 countries (2015) completed the survey. Semi-structured interviews were conducted of survey respondents purposively selected for diversity of type of work, type of organization, and geographic location: 11 from 8 countries (2012) and 20 from 15 countries (2015). No interviews were conducted in 2013 for logistical reasons. Thematic analysis was conducted on interview transcripts and responses to open-ended survey questions.

Results: Survey data indicate most respondents used knowledge from conferences to design projects or programs (55-65%), improve service quality (50-71%), or advocate for policy change (46-68%). In 2012 and 2013, the type of knowledge that respondents most commonly shared was country-specific information (71-73%) and clinical or scientific information (67-79%). In 2015, the types of knowledge most shared were expert opinion (62.2%) and experience from another participant (60.3%). Most respondents shared knowledge because they thought it would be useful to a co-worker or colleague (80-86%). Qualitative results suggest that conference factors influencing knowledge use and sharing include opportunity to interact with presenters and other participants, availability of skills building along with knowledge acquisition, and action planning for local adaptation of knowledge in country teams or individually.

Discussion/Conclusions: Global organizations seeking to increase use of evidence-based health practices to benefit vulnerable populations should go beyond dissemination to provide action-oriented knowledge exposure experiences in order to support participants in knowledge use and sharing in their local contexts.
How to assess the functioning and institutionalisation of Knowledge Translation Platforms? The development of a KT-platform scan.

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Background. To improve the use of research evidence, knowledge translation platforms (KTP) have been instigated in several countries around the world. The aim of KTPs is to create an environment that supports both research use in policy making, and the consideration of policy needs in research design. KTPs focus on connecting researchers, policy makers, and other stakeholders, synthesising knowledge, and building networks in knowledge translation. Through KTPs, several activities are initiated, including priority setting exercises, developing policy briefs, and organising deliberative dialogues. KTPs are often started by local champions, supported by international organisations and foreign funders. Evaluations of KTPs tend to focus on their separate activities and practices. Little is known about how the functioning of KTPs evolves over time and how KTPs institutionalise. The aim of this study was to develop a tool for mapping the functioning and institutionalisation of KTPs. Such a tool is relevant for everyone interested in further developing and sustaining KTPs and improving the use of research.

Methods. We developed the tool by combining insights from science and technology studies with data from observations and semi-structured interviews. The first insights were grounded in an analysis of ad-hoc KTP arrangements in Ghana and Guinea Bissau, which we enriched with data on the development and functioning of KTPs in Nigeria, Cameroon, and Jordan.

Results. The mapping tool is designed to analyse the functioning and institutionalization of KTPs at three levels: 1) a sponsorship constellation that mobilises resources for the KTP and legitimises its role in society, 2) a set of institutions, infrastructures, and networks (e.g. researchers, policy makers, health workers, patient councils, universities), and 3) the actual translation practices. Especially the first level of sponsorship constellations appeared to be a crucial factor on which the sustainability of KTPs depends. Such constellations are local constructions that make sure that KTPs can function and last without external funding. The tool focusses on the work that is required to construct such constellations through five mechanisms: problematizing the existing situation, getting people interested in improving research use, enrolling key actors to support the KTP, mobilising the required resources, and entangling the established platform in local context.

Conclusion. Mapping the functioning of a KTP at these three levels, and the mechanisms involved in developing a local sponsorship constellation provides insight into the kind of efforts that may be required to further develop these platforms, improve their functioning and facilitate their institutionalisation.
Innovative Capacity Building of District Health Officials for use of Routine Data: Some Implementation Experiences from North India

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Background: “Health Information System” (HIS) is one of the key building blocks of WHO health systems building blocks. Globally data collection, transmission and compilation has changed from manual paper based to digital mode. The skills to use data and convert into information for management are generally inadequate. Thus a need was identified and a project was rolled out with the objectives to develop and roll out a training package for routine data use by district officials, assess the feasibility and acceptance of the trainings and assess the impact of the training on some key parameters of data usage.

Methods: One day training package was developed (videos are available on request). Key officials from all 21 districts were trained in state level training, and all districts were then provided one day training for district and sub-district officials at the district venue itself. As a follow-up of district trainings, districts were supposed to use the data in their monthly review meetings. Key outcome variables at this stage were whether districts convened the monthly meetings and whether data was used in the meetings. After first round of district trainings, focus was shifted to monthly review meeting and funds were allocated to convene the meeting. As a separate research work, one postgraduate student worked in-depth in one district. She interacted with district and sub-district officials, mentored them when required, and measured the impact on the data use by medical officer.

Results and Discussion: All 21 districts were covered for state training and then district level trainings. However, it was observed that it did not translate into convening of monthly review meetings and data usage in the meetings; if at all these meetings were done in some districts. One district chosen for in-depth study also did not convene the monthly meeting. However, personal interaction and mentoring in one block of the district resulted in progressive data usage. Change in strategy to fund based dedicated monthly data review meeting has now resulted into meetings being conducted and data being discussed. However, how many types of data based decisions will be taken is yet to be seen. This paper will describe some of the implementation experiences.

Conclusions: Trainings, persistent mentorship, and mandatory mechanisms for data review meetings may help the districts to use the data.

Challenges in implementing in-service training of auxiliary nurse midwives- case study from Pune, India

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Background

Competent, committed and engaged health workers form the core of an effective and efficient health system. The WHO global strategy on Human Resources for Health: Workforce 2030 calls for the strengthening of skills of mid-level health workers by adapting more effective and efficient strategies for their education. India has more than 200,000 Auxiliary Nurse Midwives (ANMs), who play a pivotal role in primary health care system. Given the flux of issues in the public health system and ever-evolving scope of their work, several in-service training programmes are implemented for building skills of ANMs. We describe challenges faced during in-service training of ANMs in an on-going skills-building initiative in maternal and newborn health for ANMs in Pune, India.

Methods

In the ongoing in-service training, master trainers trained 38 doctors and nurses selected by the government from public and private sectors. The four-day training included interactive lectures, technical demonstrations and reverse demonstrations by using mannikins. Thirteen trainees who demonstrated good technical and training skills are expected to train 400 ANMs in batches. Monitoring and evaluation for mid-level trainers and ANMs (trainees) is an in-built component of this initiative.

Results- There is heavy reliance on in-service training of ANMs for their skill building. However, designing a granular in-service training to satisfy ANMs’ diverse needs is challenging. The tussle between available time and depth of training content compromises its quality. There is a mis-match of quality and availability of trainers. The ‘best selected’ trainers are usually expert clinicians or academicians with little time for preparation and undertaking training. Competing priorities of trainers and trainees and perceived value of in-service training affect their attendance. The trainers are not accountable for implementing robust monitoring and evaluation of in-service training and hence deputing additional human workforce for this task is harder.

Discussion / conclusions

Good in-service training should only focus on revision and updating of knowledge and skills and need not take the entire burden of ANMs’ skill building. Regularly updated and evidence-based pre-training and competency-based recruitment of ANMs will resolve this burden to some extent. Alternative approaches to in-service training can include self-directed learning e.g. learning through exposure visits, skills-mall for confidence building of ANMs; which are being explored in the present initiative. Dedicated health workforce for implementing in-service training and post-training supervision, monitoring and evaluation can pave the way towards an efficient health system with competent ANMs for any primary health care system globally.
Ying Mao, Xi'an Jiaotong University
Poster Number: 18

How does the rural-oriented tuition-waived medical education programme work? A cross-sectional survey in Shaanxi, China

Co-authors: Ying Mao, Xi'an Jiaotong University; Jinlin Liu, Xi'an Jiaotong University

Background: Attracting and recruiting health workers to work in rural areas is still a great challenge in China. The rural-oriented tuition-waived medical education (RTME) programme has been initiated and implemented in China since 2010. This study aimed to examine the attitudes of rural-oriented tuition-waived medical students (RTMSs) in Shaanxi towards working in rural areas and the related influencing factors.

Methods: A cross-sectional survey was conducted in 2015 among 232 RTMSs in two medical universities from the first group of students enrolled in the RTME programme in Shaanxi. Descriptive and analytical statistics were used for the data analyses.

Results: Of the 230 valid responses, 92.6% expressed their intentions of breaking the contract for working in rural township hospitals for six years after their graduation under the RTME programme. After the contract expired, only 1.3% intended to remain in the rural areas, 66.5% had no intention of remaining, and 32.2% were unsure. The factors related to a positive attitude among the RTMSs towards working in rural areas (no intention of breaking the contract) included being female, having a mother educated at the level of primary school or below, having a good understanding of the policy, having a good cognition of the value of rural medical work, and being satisfied with the policy. The factors related to a positive attitude of the RTMSs towards remaining in rural areas included being female, having a rural origin, having no regular family monthly income, having a father whose occupation was farmer, having a mother educated at the level of postsecondary or above, having the RTMSs be the final arbiter of the policy choice, having a good understanding of the policy, having a good cognition of the value of rural medical work, and being satisfied with the educational scheme.

Conclusions: Related policy makers and health workforce managers may benefit from the findings of this study. Appropriate strategies should be implemented to stimulate the RTMSs’ intrinsic motivation and improve their willingness to work in rural areas and to better achieve the objectives of RTME policy. Meanwhile, measures to increase the retention of RTMSs should also be advanced.
Innovative, facility-based capacity building interventions to improve newborn health outcomes in Ghana and Uganda

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Background

With growing numbers of births occurring in health facilities in Sub-Saharan Africa, it is critical that care must reflect evidence-based best practices to reduce neonatal and maternal mortality. In Uganda and Ghana, human capacity development interventions using innovative low-dose, high-frequency (LDHF) principles were implemented to improve maternal and newborn outcomes. Evaluations measured the intervention effects on provider competencies and newborn outcomes.

Methods

Design. In Uganda, the intervention was a three-arm trial randomizing 125 facilities in 12 districts. In Ghana, 40 facilities in three regions were randomized to implementation waves.

Intervention. In Uganda, 604 providers completed the Helping Mothers Survive (HMS) postpartum hemorrhage (PPH) and Helping Babies Breathe (HBB) curriculum onsite, with regular, ongoing practice using simulators. The full-intervention arm applied onsite practice coordinators and district trainer phone support. In Ghana, 403 providers completed two 4-day sessions covering basic emergency obstetric and newborn care (BEmONC). Ongoing support was provided by onsite practice coordinators, master mentors, and via mobile mentoring.

Sample and analysis. A third to a half of trained providers were re-assessed 8-12 months later and regression modeling examined changes. Monthly aggregate newborn outcomes on routine facility registers covered nearly 200,000 birth outcomes. Primary indicators were newborn deaths and intrapartum stillbirths out of total births pooled across study arms and implementation waves. A pre-study period was compared to 6-12 months post-intervention, with changes examined via regression modeling or chi-square tests.

Results

In Ghana, newborn deaths declined 56% from pre-study to post-intervention periods, while intrapartum stillbirths declined 50%. In Uganda, newborn deaths declined 62%, while intrapartum stillbirths declined 34%. PPH declined 17%. Regression models showed significant relative risk reductions.

BEmONC competencies remained high 6-12 months post-training. HBB competency remained high in Uganda's full-arm.

Conclusions

It is feasible to apply LDHF principles across geographies, and it can be scaled to improve health systems. Declines in routine adverse outcomes suggest effectiveness. Maintaining newborn resuscitation competency requires frequent practice or high client volume.

While simulation-based training on-the-job is acceptable, transition from training to mentoring and facility-based practice requires ongoing support.

Future learning will focus on replicability, sustainability and institutionalization within health systems. We will explore intervention complexity, minimum packages for durable provider learning, and expanding technical areas.
Provider-reported health outcomes can be compared to non-intervention areas from strong national reporting systems.
EMMANUEL UGWA, JHPIEGO, NIGERIA
Poster Number: 20

Simulation-based, Low-dose High-Frequency plus Mobile Mentoring versus traditional group-based training approaches on day of birth care among healthcare providers in Nigeria: a cluster-randomized controlled trial

Co-authors: Emmanuel Ugwa-Jhpiego, Nigeria; Mark Kabue-Jhpiego, Usa; Adetiloye Oniyire-Jhpiego, Nigeria; Eva Bazant-Jhpiego, Usa

Background: Training of health workers (HWs) in basic emergency obstetrics and newborn care in Nigeria has been mostly offsite, more lectures and few periods of hands-on practice on manikins, otherwise known as the traditional group-based training approaches (TRAD). There is limited evidence from low-and middle-income countries on learning outcomes using the onsite, simulation-based, low-dose high-frequency training approach (LDHF). The aim of this study is to compare the effectiveness of a simulation-based LDHF plus m-Mentoring training versus the traditional group-based training approaches (TRAD) in improving knowledge and skill in maternal and newborn care in Ebonyi and Kogi states.

Methods: This was a prospective, cluster-randomized control trial. Sixty health facilities were randomly assigned to day-of-birth care training through either simulation-based onsite LDHF with m-Mentoring training (intervention arm) or TRAD (control arm). Ethical approval and informed consents were obtained. The sample size was 274 HWs. Pre- and post-training multiple choices questionnaires and objectively structured clinical examinations checklists were used to assess performance in assisting normal births, active management of 3rd stage of labour, manual removal of placenta (MROP), external abdominal aortic compression (EAAC), management of pre-eclampsia/eclampsia (PEE) and newborn resuscitation. In preliminary analyses of change, numbers and simple percentages are used to describe categorical and mean (plus standard deviation) and medians for continuous variables. Composite scores are computed for selected variables of skill areas to determine good vs. poor skills (P-value &lt;0.05 is considered statistically significant).

Result: The study recruited and assessed 274 providers at baseline and 252 (92%) at 3 months post-training assessment. Preliminary results showed that both arms had similar sociodemographic backgrounds. Both arms also showed better performance at 3 months compared to the baseline. However, trainees in the LDHF arm had better scores in MROP (84.5±16.2) and EAAC (72.6±24) compared to those in the TRAD arm who had MROP (80.0±17.5) and EAAC (66.0±24). The differences were statistically significant. There was no significant difference in performance for other competencies between the two groups.

Discussion/Conclusion: The study validates the view that on-site LDHF/m-Mentoring training is as effective or more effective than the TRAD training approach in improving HCW skills. There is evidence that LDHF approach results in improved skills and health outcomes. By comparing an intervention and control arms the authors hope to replicate similar results, evaluate the approach in Nigeria and provide evidence to Ministry of Health. This can also be replicated in other countries to advance health systems. A complete result is anticipated.
"Looking for a Cure in Every Possible Place": Patients’ Narratives on Pathways to DRTB Diagnosis and Treatment in Nigeria

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Background:

Early detection and effective treatment are key to successful TB control. They are achieved by reducing the time from symptom onset to presentation at the TB health facility (patient delay), and the time to diagnosis and treatment (health system delay). Few studies on TB diagnosis and treatment delays have focused on drug-resistant TB (DRTB), even though DRTB patients are more likely to die earlier as a result of treatment delays. Data from low resource and high burden settings on the relationship between patient socio-demographic characteristic and timely DRTB diagnosis and treatment is limited. We explored pathways to care across socio-demographic patient groups in 3 states in Nigeria.

Methods:

Our sequential mixed method study included retrospective national cohort analysis (binomial logistic regression) and a qualitative study in 3 Nigerian States (thematic analysis). We report on qualitative analysis of 10 focus group discussions and 45 key informant interviews with patients, treatment supporters, patient relatives, community members, healthcare workers and program managers.

Results:

Quantitative analysis had suggested that patients from specific regions were more likely to have delayed diagnosis. Timeliness of treatment initiation was related to waiting for laboratory results vs clinical diagnosis and to community vs facility-based treatment initiation. Thematic qualitative analysis revealed variability in care pathways across patient socio-demographic groups. However, significant time spent seeking different care alternatives, self-medication with orthodox or herbal remedies, and religious influences were dominant themes across all patient groups. Participants identified children, young adults, and more rarely women, as being more affected by family influences. Rural patients and those with lower educational levels were reported more likely to visit traditional healers, while urban respondents visited patent medicine stores or community pharmacies long before visiting a facility. Key facilitators of access included correct information about TB disease and healthcare, as well as treatment support.

Health system delays were common to all patient socio-demographic groups. Major themes included staff overload, diagnostic challenges with data, sample transfer and processing and treatment challenges including drug side effects and unacceptability of hospital admissions. Major facilitators included motivated healthcare workers and improved program funding.

Conclusions:

Both shared and distinct barriers and enablers impact Nigerian patients’ pathways to DRTB care. Qualitative findings elucidated quantitative results, highlighting the need for interventions. Patient education and TB program engagement with providers of alternate and traditional TB care as well as reducing healthcare barriers are critical to developing more equitable DRTB services.
Leaving no one behind: Building global operational research capacity in health systems using the Structured Operational Research and Training Initiative (SORT IT) model

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Background: The Structured Operational Research and Training Initiative (SORT IT) is a global partnership-based initiative coordinated by the Special Program for Research and Training in Tropical Diseases (TDR) and implemented with various partners.

SORT IT supports countries and institutions to conduct operational research (OR) around their own priorities, build sustainable OR capacity, and make evidence-informed decisions for strengthening health systems. SORT IT aims to make health systems “data rich, information rich and action rich”. We describe the SORT IT approach, its global scale-up and the outputs including impact on policy and practice.

Methods: Three one-week workshops are conducted over 9-12 months, with clearly-defined milestones and outputs in line with 80-80-80-80 targets (80% participant evaluation scores; 80% milestone completion; 80% publication; and 80% assessment for changes in policy and practice). Course outcomes (2009-2017) were assessed by cohort analysis and questionnaires.

Results: Since 2009, 53 SORT IT courses have been initiated in Asia, Africa, Europe, Latin America and the South Pacific. There were 579 participants (44% female) from 64 nationalities conducting research in 87 countries. Most participants (~65%) were from government programs and non-governmental agencies.

Targets were assessed on the 44 (83%) courses that were completed by December 2017. All course modules scored ≥80% in evaluations. Of 485 participants in completed courses, 431(89%) completed milestones, submitted 487 manuscripts to scientific journals of which 371 (76%) were published as of December 31, 2017.

Individuals from LMICs constitute 94% of first authors, 93% of corresponding authors and 48% of last authors. 46% of first authors were women. Papers were published in 41 journals (impact factor 0.4-19) and in five languages (English, Russian, Spanish, Portuguese and French).

Health-system themes included tuberculosis, HIV/AIDS, malaria elimination, Ebola, migration, sexual violence, Neglected Tropical Diseases, tobacco, cancer, water and sanitation, mental-health and maternal and child health.

Of publications assessed for policy and practice (n=267), 181 (65%) self-reported an effect. This included changes to program implementation, adaptation of monitoring tools and changes to existing guidelines. Alumni have now successfully conducted national courses in India, Kenya, Pakistan and Colombia with support from various donors including The Global fund, improving the prospects for post-course sustainability.

Conclusions: The SORT IT model has proved to be effective in building operational and institutional research capacity to help improve health system performance in low- and middle-income countries. Further scale-up SORT IT to address different themes would ensure health system capacity that leaves no one behind.
Strengthening the essential but often neglected software elements of health system functioning: a novel initiative targeting frontline providers and their line-managers in Kenya

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Purpose: In order to deliver for all, health systems in LMICs have to be resilient in the context of chronic stressors (resource constraints, constant policy change) and sudden shocks (epidemics, dramatic policy change or political upheaval), as well as be responsive to the priorities and needs of patients and the broader public. Frontline providers and their immediate managers are key actors in complex health systems, and therefore central to system resilience and responsiveness. However these cadres are often inadequately prepared for and supported in the complex range of roles that they take on, and challenges that they have to deal with, with particular inadequacies in support for the inter-personal elements (communication skills, management of emotions, supportive oversight etc).

Focus/content: In this presentation we will share our experiences from Kenya of designing and implementing a participatory course aimed at building the soft skills of county managers and the software of the systems they are part of. The course is being conducted in one county on the coast as part of a broader research collaboration between researchers and health managers (our ‘learning site’). The course draws heavily on a participatory communications and emotional management course for health workers (the Haaland model), as well as Collaboration for Health Policy and Research in Africa (CHEPSAA) complex health systems training modules. It includes: a) self-observation and reflection on chronic problems faced, communication and leadership/management styles, and its’ impact on self and others; b) short participatory knowledge and skills building sessions on health system complexity and software, and essential soft skills, and c) self-observation and reflection on the application of new ideas in practice. We will draw on observation data, course materials and discussions, and in-depth interviews with course participants and other health workers and managers to describe the course and its’ potential to strengthen the essential but often neglected software elements of health system functioning. Specifically we will highlight the opportunities and challenges of working with mid-level managers or leaders, and ensure that their experiences feed directly into our presentation in the form of ‘talking heads’ or short videos.

Relevance to sub-theme area/field-building dimension: Overcoming challenges to access and quality of health care for all, and in particular the most vulnerable in society, requires interventions and strategies that build the soft skills of frontline staff and their line managers, in turn contributing to organizational strength.

Target audience: health researchers, managers and policy makers
Simulation-based, Low-dose High-Frequency plus Mobile Mentoring versus traditional group-based training approaches on day of birth care in Ebonyi and Kogi States, Nigeria: cluster-randomized controlled trial

Co-authors: Emmanuel Ajuluchukwu Ugwa-Jhpiego, Nigeria; Mark Kabue-Jhpiego, USA; Adetiloye Oniyire-Jhpiego, Nigeria; Eva Bazant-Jhpiego, USA; Anne Hyre-Jhpiego, USA

Background: Training of health workers (HWs) in basic emergency obstetrics and newborn care in Nigeria has been mostly offsite, more lectures and few periods of hands-on practice on manikins, otherwise known as the traditional group-based training approaches (TRAD). There is limited evidence from low-and middle-income countries on learning outcomes using the onsite, simulation-based, low-dose high-frequency training approach (LDHF). The aim of this study is to compare the effectiveness of a simulation-based LDHF plus m-Mentoring training versus the traditional group-based training approaches (TRAD) in improving knowledge and skill in maternal and newborn care in Ebonyi and Kogi states.

Methods: This was a prospective, cluster-randomized control trial. Sixty health facilities were randomly assigned to day-of-birth care training through either simulation-based onsite LDHF with m-Mentoring training (intervention arm) or TRAD (control arm). Ethical approval and informed consents were obtained. The sample size was 274 HWs. Pre- and post-training multiple choices questionnaires and objectively structured clinical examinations checklists were used to assess performance in assisting normal births, active management of 3rd stage of labour, manual removal of placenta (MROP), external abdominal aortic compression (EAAC), management of pre-eclampsia/eclampsia (PEE) and newborn resuscitation. In preliminary analyses of change, numbers and simple percentages are used to describe categorical and mean (plus standard deviation) and medians for continuous variables. Composite scores are computed for selected variables of skill areas to determine good vs. poor skills (P-value &lt;0.05 is considered statistically significant).

Result: The study recruited and assessed 274 providers at baseline and during 3 months post-training assessment 252 (92%) were assessed (123 LDHF and 129 TRAD). Both arms had similar sociodemographic backgrounds. Both arms showed better performance from baseline. However, those in the LDHF had better scores in MROP (84.5±16.2) and EAAC (72.6±24) compared to those in the TRAD arm who had MROP (80.0±17.5) and EAAC (66.0±24). The differences were statistically significant. There was no significant difference in performance for other competencies between the two groups.

Discussion/Conclusion: The study validates the view that on-site LDHF/m-Mentoring training is as effective as or more effective than the TRAD trainings in improving HCW knowledge and skills. There is evidence that LDHF approach results in improved skills and health outcomes. By comparing an intervention and control arms the authors hope to replicate similar results, evaluate the approach in Nigeria and provide evidence to Ministry of Health. This can also be replicated in other countries to advance health systems.
Rethinking Collaboration: Developing Knowledge Partnerships To Address Under-5 Mortality In Mpumalanga Province, South Africa

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BACKGROUND: In South Africa, a complex and socially patterned burden of avoidable mortality exists and continues to evolve. Despite over 20 years of progressive health policy, implementation is beset with challenges in a dysfunctional public system with scarce resources. Our aim was to develop a research process relevant for use in health systems, generating and feeding back evidence of practical relevance on the social determinants of avoidable ill-health and on policy implementation.

METHODS: Drawing on the health policy and systems research paradigm, we developed an approach to co-produce evidence with and for the provincial and district health system in Mpumalanga province, South Africa. With input from the Provincial Directorate for Maternal, Child, Women and Youth Health and Nutrition (MCWYH&amp;N) on priority topics, we developed quantitative and qualitative evidence on under-5 mortality with the MRC/Wits Rural Public Health and Health Transitions Research Unit (Agincourt). We used Verbal Autopsy (VA) to quantify levels, causes and circumstances of deaths, and Participatory Action Research (PAR) to gain local knowledge on lived experiences and priorities for action. Two engagement workshops were held to review the VA/PAR evidence with the district and provincial Directorates of MCWYH&amp;N, Non-Communicable Diseases, Primary Health Care, and Research and Epidemiology. With investigators, stakeholders analysed and interpreted these data, and appraised the process for use in the health system.

RESULTS: Several systems issues were identified: (a) inadequate infrastructure and organisation of services; (b) constrained availability and performance of health workers; (c) frequent policy and programming changes and parallel initiatives; and (d) lack of capacity of the health system to address social determinants. Action agendas were developed to: (a) reduce waiting times through improved clinic organisation; (b) improve response times with organised ambulance services; (c) expand community education on health rights and responsibilities; and (d) develop the process towards multi-sectoral collaboration with departments adjacent to health. The actions ranged from immediate low- and no-cost re-organisation of existing services, to those where responses from higher levels of the system were implied. The process was appraised as acceptable and relevant for use in health systems, and the combination of quantitative and qualitative evidence was viewed as powerful and insightful.

CONCLUSIONS: HPSR informed the development of a knowledge partnership connecting research evidence, here on rural health priorities, with the means for enhanced interpretation, and ultimately, more effective action. Sustaining the partnership is essential to realize gains for health systems strengthening through operationalizing, and learning from, action.
Remote mentoring model for assessment of children with disabilities in Uttarakhand, India

Co-authors: Shubha Nagesh-Latika Roy Foundation

Background: Reductions in under five mortality rates has shifted global program and policy focus to lives that thrive and live with or without disability in most parts of the world. In the Indian Himalayas, identification and assessment of developmental disabilities in young children poses a huge challenge, and intervention therefore remains a far dream. With no developmental pediatricians in Uttarakhand, the Himalayan state of India, the program uses expertise from a qualified early development expert based in a high income country to train, support and supervise a team of local professionals in the field for assessment and intervention of childhood disabilities.

Objectives: The model provides expert supervision and support in the local language and maximizes use of limited resources of time, money and personnel. The model depends on a strong mentorship capacity, committed time by professionals to assess, record, share and seek guidance, and deep relationship building which in turn strengthens the support between the family and the team.

Methods: The program began with on site training on the use of new tools for assessment. The module initiated with training to build the knowledge base and was followed by multiple hands-on sessions on the use of assessment tools. Multiple sessions with close supportive supervision were followed by the local professional teams conducted the assessments independently. The assessments reports were emailed to the consultant and video recordings were uploaded on the Internet using strict privacy settings. The local team received immediate feedback and timely support with diagnoses and intervention plans for the child and the family. The consultant and the local team meet face to face twice a year to develop further insights, review complex cases, and training in advanced modules.

Results: In one year, the team assessed, diagnosed and provided intervention support to more than one hundred children. The model provided on-site training support using new assessment tools and distance support to validate assessments and diagnoses thereafter to a team of local professionals. Children and families receive the benefit of best practice interventions and specialist inputs. While we understand the pivotal role technology plays in this program, we cannot undermine the value of on-site visits and face-to-face meetings.

Conclusion: This model can be adapted and applied to settings where there is a need for training and support, but no experts locally available. The distance-mentoring model can supplement the more traditional model of site based service delivery and support.
Poster Abstracts

Alice Grasveld, Alice Grasveld, freelance Action Researcher for DWT
Poster Number: 27

‘Healthy Teeth Challenge’, a participatory action research into oral health amongst children age 0-12 from a township in Cape Town, South Africa

Co-authors: Alice Elsbeth Grasveld-Alice Grasveld, freelance Action Researcher for DWT; Marjolein Dieleman-VU University, Amsterdam

Abstract

Background: In South African townships, one of the most common causes of school absenteeism amongst children, is toothache. According to the charity Dental Wellness Trust (DWT), 80% of township children suffer from tooth decay and access to dental care is poor. For instance, in Mfuleni township, Cape Town, approximately 100,000 inhabitants are served by two dentists and one oral hygienist. Additionally, children’s diet is poor, and includes cheap sugars, leading to severe tooth decay. Moreover, most children in Mfuleni do not own a personal toothbrush. DWT has set up various oral health programs in Mfuleni township, in which 8000 children participate. ‘Healthy Teeth Challenge’, project is a participatory action research (PAR) recently set up for DWT, to identify, the root causes and the outcomes of poor oral health for children and to involve community members and local stakeholders in oral health to propose solutions.

Methods: The action research applied different methods: participant observation at a primary school 26 interviews amongst teachers, school personnel, parents, volunteers, dentists and oral hygienist, and traditional healers; 19 focus group discussions with school children; five house and three work visits to different stakeholders, four photovoice and four dietary anamnoses amongst children. These mixed qualitative methods allowed insights into perceptions, beliefs and daily practices regarding oral health and the diet of the children.

Results: In the action phase the data was presented to the community and an action plan was designed together with teachers, mothers, children, volunteers, researchers, local dentists and oral hygienist to address tooth decay amongst schoolchildren. One part of this action plan was oral health education, handwashing and toothbrushing lessons to almost 2000 pupils at a primary school. Other actions included a play to raise awareness about the impact of poor oral health amongst community members, reaching out to the community leaders and a Facebook group about oral health and healthy nutrition.

Conclusion: The impact of this participatory action research is that additionally about 2,000 children are involved in the DWT oral health programs. Currently, because of all the DWT oral health programs, in total 10,000 children brush their teeth every day in Mfuleni. PAR has risen awareness about oral health amongst school children, their parents and teachers. PAR allowed co-creation of sustainable solutions among researchers, community members and local stakeholders. This lead to joint ownership of the action plan.
Poster Abstracts

Rajesh Khanna, Save the Children
Poster Number: 28

Management of Possible Serious Bacterial Infections (PSBI) in Young Infants in Rural India: Pilot Study on Reaching the Vulnerable Population through Health System Strengthening approach

Co-authors: Rajesh Khanna-Save the Children; Stephen N Wall-Save the Children; Archisman Mohapatra-INCLEN; Sabyasachi Beherda-Save the Children; Shiv Kumar-Save the Children; Vinod Kumar Anand-Save the Children; Lara Vaz-Save the Children; Elaine Scudder-Save the Children

Background

India accounts for 27% of global neonatal mortality; serious infections are responsible for one-third of these deaths as referral for appropriate care is frequently not feasible. In 2014, the Government of India (GOI) issued Guidelines for syndromic identification of young infants (0-59 day old) with Possible Serious Bacterial Infections (PSBI) and their outpatient/ community-based management by Auxiliary Nurse Midwives using simplified antibiotic regimen (7-day course of injectable Gentamicin and oral Amoxicillin). We conducted a pilot study to learn what it takes to deliver a package of interventions (including the aforementioned Guidelines) to improve PSBI management in young infants at primary care level in a resource-constrained, rural district of India.

Methods

The mixed-method study with pre-posttest design was conducted from September 2015 to February 2017 in five of ten blocks (study population 1 million i.e. 53% of the total district population) in district Saharsa of Bihar, India. Saharsa is designated as a high-priority district by GOI for its low performing indicators (NMR 37; IMR 48; literacy rate 40%; largely agrarian population). With decentralized block-level planning and by leveraging government resources, PSBI management services were strengthened at all three levels of primary health care (home, outreach/community, primary health facilities) to facilitate continuum of care. Inputs included refresher trainings for all health functionaries, supportive supervision by system-based supervisors, supply chain management support, monthly data feedback to managers, community-based follow up and tracking, and behavior change messaging for clients and providers.

Results

Of the 1036 young infants initiated on PSBI treatment in the public health system, 77% received complete 7-day course of antibiotics with 90% of them receiving it from the Primary Health Centre (PHC). Overall case fatality rate was less than 1%. Additionally, there was a steady increase in detection of PSBI cases with clinical signs suggestive of more serious illness, and their management at PHC.

There was more than four-fold rise (p-value $< 0.0001$) in infants with PSBI receiving treatment from public health facilities compared to baseline; the rise was across all socio-economic strata but higher for marginalized sections. Correspondingly there was decline in care-seeking from informal health providers. A consistent improvement was observed in coverage and quality of services (including logistics, supervision) at all levels.

Conclusion

In resource constrained rural settings, strengthening primary health system, community platforms and their linkages for detection and management of PSBI in young infants can lead to increased care seeking from public health facilities.
Referral adherence for sick newborns with possible serious bacterial infection in Ethiopia: policy implementation to practice

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Background: Ethiopia’s Community-Based Newborn Care (CBNC) program seeks to serve the most vulnerable populations by bringing health services closer to communities. Early identification and timely, appropriate management of young infants (0-2 months) with possible serious bacterial infection (PSBI) is fundamental for reducing mortality. Through CBNC, up to 80% of PSBI cases could be managed by health extension workers at health posts (HP) when referral is not possible. Experience has been variable, with some HPs referring all PSBI cases, others treating all cases, and some families self-referring to higher level facilities. We carried out research to understand referral processes and factors influencing them.

Methods: We employed a mixed-method design in five zones across two regions in Ethiopia. Study subjects were sick young infants classified with PSBI and referred to higher facilities over the previous 12 months. We purposefully selected 33 health centres (HCs), 46 HPs, and 20 Woreda Health Offices (WrHOs). Methods included clinical record reviews, surveys of referred caretakers and health worker interviews. The study received ethics approvals from the Ethiopian Science and Technology Ministry Institutional Review Board and the Save the Children – US Ethics Review Committee.

Results: Register review identified 209 young infants with PSBI referred to higher facilities, or 27% of cases seen. HPs most commonly referred to government HCs (71%) while HCs referred most frequently to public hospitals (38%). Of 145 caretakers tracked and surveyed, only half reported receiving a referral slip. Existing referral system and referral practices deviate from the national protocol with less than half of young infants with PSBI (47%) treated with the recommended pre-referral treatment regimen at HPs and 27% referred without any pre-referral treatment. Overall poor communication was observed between facilities, with limited use of referral slips, duplication in records and limited feedback to health extension workers from referral destination health facilities. Record-keeping of PSBI cases and referrals was poor, especially at the HC level. Referral adherence by caretaker report (88%) conflicted with HC registers (23%).

Conclusion: Referral systems are critical to strong health system functioning. Referral systems need to be strengthened to ensure no one is left behind, especially young infants with PSBI who are amongst the most vulnerable. Referral practices for young infants with PSBI needing attention include communication between facilities, consistent use of referral slips and documentation of care provided. Supportive supervision to HPs and HCs could help improve referral practice and implementation according to the guidelines.
The Impact of Reorganization of Primary Healthcare Professionals on Under-5 Mortality in Rural China

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Background: One priority in China’s health system reform in 2009 is to strengthen capacity of health system by increasing healthcare resources to address, among other factors, overburdened hospitals and inadequate primary care infrastructure. Previous studies have focused on the impact of increased health professionals(HP) on child health, but little is known about how the reorganization of such professionals between primary healthcare centers(PHC) and hospitals may have affected child health. Thus, we examine the impact of changes in the structure of HP on Under-5 Mortality(U5M) in rural China from 2008 to 2014.

Methods: We conducted an interrupted time series design with the county as the unit of analysis(n=1,989) to evaluate the impact of HP structure on U5M with fixed effects model. HP structure(PHP) was measured as the proportion of all HP in each county that were based in PHC(as opposed to hospitals/other facilities). A quadratic term for PHP was included to consider potential nonlinear relationships. Covariates included county Gross Domestic Product per capital and female illiteracy rate. Counties with <2.28 total HP/1000 population were regarded as having insufficient health professionals since they were unlikely to achieve 80% coverage for skilled birth attendants and measles immunization, while other counties were defined as sufficient. Total HP was treated as a moderator.

Results: The average U5M in counties with insufficient HP was 2.84/1,000 live births higher than in other counties(p<0.001), but this gap was narrower where PHP was around 40%. In counties with insufficient HP and low PHP(PHP<39.61%), PHP was negatively associated with U5M, while the association was positive when PHP became larger. In counties with sufficient HP but low PHP(PHP<42.27%), PHP was positively associated with U5M, but when PHP was higher, its association with U5M became negative.

Discussion/Conclusions: This study demonstrates complex relationship between overall HP supply and the mix of primary care versus other types of HP. To have maximum impact on reducing U5M, reorganizing HP in China would require different strategies. In counties with insufficient HP, redistributing professionals to PHC may fill PHC service gaps without negatively affecting the contribution of hospital-based professionals on reducing U5M. However, if sufficient HP are already working in PHC, further redistributing HP out of hospital settings may actually be detrimental to children. In counties with sufficient HP where basic healthcare services by hospital and PHC can satisfy children’s needs, further reductions in U5M might require attention to conditions which can only be treated in hospitals.
Appropriate case-management of childhood pneumonia and severe pneumonia in public health facilities of Uttar Pradesh and Bihar, India: key to reducing under-five mortality

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Background: Globally, pneumonia claimed around 900,000 under-five lives in 2016, of which more than 180,000 were in India. Most of these deaths were linked to inappropriate case-management of pneumonia and severe pneumonia in public health facilities. The study was undertaken in selected public health facilities in Uttar Pradesh (UP) and Bihar to understand the case-management of childhood pneumonia and severe pneumonia.

Methods: We selected 36 high caseload facilities in six districts of UP, and 28 in four districts of Bihar. Within each selected facility, we identified children aged 1-59 months with symptoms suggestive of an illness. Children diagnosed with pneumonia and severe pneumonia were assessed using out-patient and in-patient observation tools adapted from World Health Organization’s facility-based integrated management of neonatal and childhood illnesses checklist. We also undertook an equipment and supplies audit of health facilities to assess the availability of drugs and commodities required for appropriate management of pneumonia and severe pneumonia.

Results: The study was implemented for around two weeks in each facility. During this period, 132 children were diagnosed with pneumonia and 291 with severe pneumonia across all the health facilities. Facility providers counted respiratory rate for one minute in only 2.4% of the diagnosed children. Of all the diagnosed pneumonia cases, 31.8% received amoxicillin, and of all the diagnosed severe pneumonia cases 4.5% received pulse oximetry, 4.1% nebulization, and 3.5% ampicillin (benzylpenicillin) plus gentamicin, or ceftriaxone plus oxygen. Additionally, 6.9% of severe pneumonia cases got admitted and 0.7% got referred to a higher-level facility. Of all the selected public health facilities, 65.6% had amoxicillin, 25% ampicillin, 73.4% gentamicin, 46.9% ceftriaxone, 7.8% benzylpenicillin, 60.9% nebulizer, 62.5% pulse oximeter, and 37.5% had other equipments (oxygen flow meter, nasal catheter, face mask sizes 0, 1, and 2, and nasal prongs).

Conclusion: Public health facilities score badly in terms of both the drugs and commodities, and case management skills of facility-based providers related to the management of childhood pneumonia and severe pneumonia. Diagnosis of pneumonia and severe pneumonia was based on presenting complaints without counting the respiratory rate, only one-third of pneumonia and less than 5% of severe pneumonia cases got appropriate treatment, and there were practically no admissions and no referrals of severe pneumonia cases to higher-level facilities. Childhood programs that aim to reduce under-five morbidity and mortality should focus on strengthening the supplies and case-management skills of facility-based providers, especially with regard to childhood pneumonia and severe pneumonia.
Using an integrated emergency care intervention to improve quality of hospital care in Rwandan district hospitals: implementation and impact evaluation

Co-authors: Celestin Hategeka-University of British Columbia; Larry D Lynd-University of British Columbia; Lisine Tuyisenge-University Teaching Hospital of Kigali, Rwanda; Michael R Law-University of British Columbia

Background: Although efforts are underway to increase the number of specialist healthcare providers in Rwanda, many non-specialist healthcare providers in district hospitals often handle complicated pediatric and neonatal emergencies in the absence of specialists. Despite this they have expressed concerns about their lack of confidence with regards to dealing with newborn and child emergency conditions. At the same time, pediatric advanced life support management adapted for low-income countries (LICs) has increasingly been advocated as a method to reduce under-five mortality. In response, non-specialist healthcare providers from Rwandan district hospitals were trained in ETAT+ (Emergency Triage, Assessment and Treatment PLUS Admission Care) to prepare them to provide effective emergency pediatric and neonatal care and, ultimately, improve newborn and child health. The objective of this study was to evaluate the impact of the ETAT+ training on providers' knowledge and child health outcome in Rwanda.

Methods: We used a pre-post design to investigate the effect of ETAT+ on healthcare providers' knowledge. Moreover, using mixed methods design, we identified potential factors (barriers/facilitators) associated with healthcare providers' performance in ETAT+. Furthermore, using controlled interrupted time series analysis (one of the strongest quasi-experimental designs) and segmented regression methods, we will evaluate the impact of ETAT+ on neonatal and paediatric hospital mortality rate, length of hospital stay, successful neonatal resuscitation rate and transfer pattern among children younger than five years. For the impact on patient-level outcomes, longitudinal administrative health data from mid-2012 to mid-2018 will be included in the analysis.

Results: Our analysis included 374 healthcare providers trained in ETAT+. Post ETAT+, providers' knowledge/skills improved significantly. Language proficiency, location of ETAT+ training, timing/delays in receiving training materials, and format of training materials were key factors associated with healthcare providers' performance in ETAT+. Following ETAT+ training, healthcare providers face challenges when attempting to apply new knowledge/skills from the training: Within facility staff rotation, reluctance to change, limited resources, conflicting clinical practice guidelines. For the ETAT+ impact on patient-level outcomes, findings will be included after mid-2018 and before the conference.

Discussion/Conclusions: Improvements in post-ETAT+ performance were significant and key factors were identified as important influences on ETAT+ training outcomes. Important factors hampering the uptake of the ETAT+ guidelines were also identified. Given the importance of context and the reality that interventions are rarely implemented with perfect fidelity under real-world conditions, it is important to evaluate the real-world experiences with implementation of ETAT+ to identify barriers/facilitators to its successful implementation.
Outcomes of Extremely Low Birth Weight Newborns in low resource settings: Are we neglecting them?

Introduction

Prematurity is the leading cause of death among newborns. The World Health Organisation (WHO) defines birth as a newborn weighing greater than 1000 grams or gestational age of greater or equal to 28 weeks in developing countries. While human viability at gestational ages less than 28 weeks is improving in sub-Saharan Africa, extremely premature infants (less than 28 weeks gestation) and extremely low birth weight infants (<1000g) born in health facilities are often registered as abortions. Contrary to expectations, some of these newborns survive. Low-cost interventions coupled with improved care have increased survival of these babies, however, outcomes of these infants are not known and not reported in national statistics. In this study, we estimate the proportion of newborns between 500-1000 grams and outcomes before discharge from the health facility.

Methods

Pre-term birth initiative (PTBi) East Africa is testing a package of intrapartum/immediate newborn interventions for reducing morbidity/mortality and improving 28-day survival of preterm infants. The project collects patient level data for every birth in six facilities in Uganda and 17 facilities in Kenya. Register variables including birth weight, Apgar score, infant gender, maternal characteristics and birth outcomes are collected monthly using an ODK system and stored on a secure server.

Results

We extracted data from March 2016 to January 2018 across five government referral hospitals, 4 mission hospitals, 10 sub-regional hospitals and 4 health centers in Uganda and Kenya; among these, 10 provide cesarean sections and none have neonatal intensive care units. A total of 59,309 births (40,920 in Uganda and 18,389 in Kenya) were registered, including 56,581 live births, 5,821 low birth weight, and 2,728 stillbirths. Of all births, 261 were between 500-1000g (173 in Uganda and 88 in Kenya) representing 0.44% of total births.

Outcomes among these EBLW: forty-three percent (113/261) were born alive and of these 27.4% (31/113) were discharged alive; 148 (57%) were stillbirths. Of these discharged alive, four were still alive by the 28th day of life.

Conclusion

Survival of low birth weight babies is increasing with the use of low-cost interventions yet many countries still define them as abortions. Health systems need to begin planning for these babies now that technological advances like CPAP and increased use of KMC exist even in limited resource settings. Neonatal and stillbirth rate calculations should factor in these babies to assess the performance of health sectors.
The know-do gap in sick child care in Ethiopia


Background: While health care provider knowledge is a commonly used measure for process quality of care, evidence demonstrates that providers don't always perform as much as they know. We describe this know-do gap for malaria care for sick children among providers in Ethiopia and examine what may predict this gap. This analysis was conducted as part of the Lancet Global Health Commission on High Quality Health Systems in the SDG Era.

Methods: We use a 2014 nationally-representative survey of Ethiopian providers that includes clinical knowledge vignettes of malaria care and observations of care provided to children in facilities. We compare knowledge and performance of assessment, treatment and counseling items and overall. We subtract performance scores from knowledge and use regression analysis to examine what facility and provider characteristics predict the gap.

Findings: 512 providers that completed the malaria vignette and were observed providing care to sick children were included in the analysis. Vignette and observed performance were both low, with providers on average scoring 39% and 34% respectively. The know-do gap for clinical assessment was only 1%, while the gap for treatment and counseling items was 39%. Doctors had the largest gap between knowledge and performance. Only provider type and availability of key equipment significantly predicted the know-do gap.

Conclusions: While both provider knowledge and performance in sick child care are poor, there is a gap between knowledge and performance particularly with regard to treatment and counseling. Interventions to improve quality of care must address not only deficiencies in provider knowledge, but also the gap between knowledge and action.
Marcus Wootton, Royal College of Paediatrics and Child Health
Poster Number: 35

Strengthening the quality of paediatric care in Myanmar district hospitals

Co-authors: Marcus Wootton-Royal College of Paediatrics and Child Health; Jay Halbert-Royal College of Paediatrics and Child Health; Sai Kyaw Kyaw Latt-Myanmar Paediatric Society; Seb Taylor-Royal College of Paediatrics and Child Health; Jean Bowyer-Royal College of Paediatrics and Child Health; Kyaw Soe-Myanmar Paediatric Society; Khin That Sin-Myanmar Paediatric Society

Background: Health inequalities between rich and poor countries have fallen dramatically under the MDGs (Bhutta & Black, 2013). But there remain growing inequalities in health and health care between groups within countries at all levels (Gwatkin, 2017). These inequalities pose a significant threat to the achievability of Universal Health Care and related goals under SDG3. As much as universal health care depends on equitable distribution of care among population groups, it also depends on adequate integration of levels of care creating an appropriately comprehensive set of linked services. Failures of integration between primary and secondary levels of care – and weaknesses in infrastructure, equipment, medications and health workforce skills at secondary (district hospital) level – continue to compromise the proper comprehensive essential functions of the health care system in many low- and lower-middle income countries (WHO, 2016).

Intervention: The Royal College of Paediatrics and Child Health (UK) has worked since 2012 with the Myanmar Paediatric Society to develop an ‘Emergency Paediatric Care Programme’ (EPCP), based on the WHO Emergency Triage Assessment and Treatment Plus (ETAT+) protocol, aligned with the national Integrated Management of Newborn and Childhood Illnesses (IMNCI) initiative. EPCP is delivered as a 5-day training course, complemented by long-term mentorship by UK volunteer clinicians over six months, in selected district hospitals in three regions of Myanmar. EPCP aims to improve outcomes for newborns and children at secondary facilities through integrated enhancement of: clinicians’ skills and hospital systems.

EPCP focuses on improving: triage; resuscitation (neonatal and paediatric); care of paediatric pneumonia; care of neonatal sepsis; implementation of newborn baby checks; use of Kangaroo Mother Care; and use of job aids.

Results: Measuring systemic change and care quality improvement, as more nuanced indicators of facility performance than mortality alone, presents challenges in health system strengthening. Using independent assessors and a 5-point Likert scale at baseline, 6 and 12 months, we find improvements in the capabilities of clinicians trained, and the quality of key hospital systems which deliver care, notably in resuscitation (30% improvement in assessed care quality) and the treatment of sepsis and pneumonia (40% improvement). Furthermore, form a baseline of 0%, after 12 months 75% of sample hospitals were practicing a form of Kangaroo Mothercare. Disaggregated data for individual hospitals shows significant degrees of variance in progress made.

Conclusions: Cognisant of the limitations of assessment we see encouraging signs of improvement in care quality following the EPCP intervention.
Reducing premature child mortality in Northern Togo: 24-month evaluation of an integrated community-based health systems strengthening initiative

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Background: Togo is currently off track to achieve Sustainable Development Goal 3.2 related to neonatal and child health. In 2014, the under-5 mortality rate for children born in Togo was 80/1000 live births, with birth complications, pneumonia, diarrhea, malaria, and malnutrition as leading causes of premature mortality. According to the Togolese Government, 62% of Togo’s population lives less than 5 km from a public-sector health clinic, and yet only 30% utilize these facilities. In 2014, we launched a 3-year integrated community-based health system strengthening (ICBHSS) initiative in communities covered by four public sector clinics. The ICBHSS model includes the following package of evidence-based interventions: (1) user fee elimination, (2) proactive case management using community health workers (CHWs), (3) facility-based clinical mentoring and enhanced supervision, (4) strengthened supply chain management. We present an evaluation of the ICBHSS initiative implementation using the RE-AIM implementation science evaluation framework.

Methods:

Setting: Four communities in Northern Togo with estimated maternal and child catchment population of 5,843 and baseline average health facility utilization rate of 27% (range 12-40%) in 2013.

Design: We evaluated fidelity to planned implementation using program and monthly reports from both CHWs and facilities to summarize process indicators. We conducted an interrupted time series design with household survey data using population weighted sampling in each community to estimate annual mortality rates. Using mortality data, we performed a return on investment analysis using the Community Health Planning and Costing and Lives Saved Tool.

Results: Results are organized in Table I by RE-AIM framework domains for first 24-months of ICBHSS implementation in Northern Togo, from August 2015 to 2017.

Table I:

Indicator Target; 12-months; 24-months

Reach

Pediatric consultations (age 0-5 years), annual 20,000; 23,181; 22,053

Pre- and post-natal consultations, annual 4,195; 2,712; 4,087

Effectiveness

Under-five mortality rate (per 1000 live births)* 25; 36; 20

Return on Investment ratio (total cost 7.74 USD/capita) ; 10:1; -

Adoption
Health facility-based deliveries 80%; 67%; 75%

Implementation (fidelity)

Pediatric cases (0-5 years) assessed within 72 hours of symptom(s) onset 90%; 76%; 86%

CHW adherence to case management protocol 99%; 97%; 98%

*Baseline under-five mortality rate in four catchment areas was 70/1000

Conclusions: Preliminary results at 24 months suggest that ICBHSS initiative implementation is associated with increased healthcare coverage, differences in health seeking behaviors, improvement in quality, and reductions in premature mortality. These promising initial results may represent a multi-component strategy to reduce child mortality in resource-limited settings.
A household survey on access to medicines for chronic diseases in Sichuan Province, China

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BACKGROUND: Access to medicines is considered to be a fundamental human right by the World Health Organization (WHO) and many national constitutions. For many in China, poor access to medical services and high out-of-pocket costs for medicine was a problem that residents were most concerned about, especially the high cost of medicines and the heavy financial burden for chronic diseases. Since 2009, the Chinese government has implemented a series of health reform policies to improve the accessibility of medicine, which included the National Essential Medicines System (NEMS), the abolition of drugs markup policy, etc. This study aimed to find out the current situation of access to medicines for chronic diseases in Sichuan, the most populous province in southwest China and explore how the socioeconomic status, behavioral factors and perceptions about medicines availability and affordability influence access to medicines for chronic diseases.

METHODS: in accordance to WHO standardized rapid cluster sample survey method to evaluate the accessibility and use of medicines in households in middle- and low-income countries. We sampled a total of 1200 households in the six cities of Chengdu, Mianyang, Neijiang, Guang’an, Nanchong and Bazhong in Sichuan China to carry out a questionnaire survey during March through July of 2015. Logistic regression models accounting for the clustered survey was conducted to obtain the determinants of keeping medicines at home and predictors of access to medicines for chronic diseases.

RESULTS: Over all, we ultimately received 1103 valid questionnaires, and 47.2% of surveyed households reported that members had a chronic condition. Of these, more than 90% took medicines for treating the reported chronic disease and 88.7% kept one or more medicines at home which needed to treat the reported chronic disease. Household reporting chronic diseases was the most significant predictor of keeping medicines at home. Households with a good income or a higher education increased the likelihood of keep any medicines at home. Patients aging over 40 years old and households with a higher education was the most significant predictor of access to medicines for chronic diseases. Households in rural areas were more likely to access to medicines.

CONCLUSION: The accessibility of medicines for chronic diseases among households needed to be improved. In the future, health department should develop more effective medicines policies to ensure equitable access to basic medical treatments, especially for the poor.
Designing and tailoring interventions to improve implementation of tuberculosis contact investigation and preventive treatment in Mimika district, Indonesia

Introduction

Indonesia is one of the highest TB burden countries with an estimated incidence of 391 per 100,000 population and low case notification rate of 35% in 2016. The National TB guideline provides recommendations that contact investigation among active TB cases should be routinely performed and TB preventive treatment should be provided to the high-risk individual. However, only few health facilities in Indonesia have implemented this policy. This paper described our approach to the development of implementation strategies to improve contact investigation and TB management for children living in close contact with a TB patient.

Methods

Implementation research using mixed methods approach was conducted in Mimika district of Papua Province. It started in June 2017 until December 2018, involving two hospitals and three primary health centres which contributed to 70.4% (1,055) of case finding in Mimika district in 2016. Four phases of improvement were followed, i.e. 1. Problem definition and preparation, 2. Improvement design and planning, 3. Implementation and 4. Sustainment and spreading. We adapted the Behavior Change Wheel implementation framework in phase 1 and 2 to measure capability, opportunity and motivation of healthcare workers to informed decision making in designing targeted interventions. Three Plan-Do-Study-Act (PDCA) cycles, involving TB staffs and district TB coordinator, were conducted to allow structured analysis of the improvement process, assist problem-solving approach, and use of data analysis to assess change.

Results

We led focus group discussions with TB staff from participating health facilities and the district health office in the start of the study and in each PDCA cycle to explore sources of behaviour, intervention functions and policy categories. Commonly reported barriers include: lack of knowledge, geographical, lack of funding, unclear planning and budgeting, TB stigma, understanding the concept of disease prevention, unavailability of diagnostic test to screen latent TB infection and diagnosed TB in young children, unavailability of pediatric isoniazid formulation, and communication due to variety of local languages. We identified education, training, persuasion, enablement, incentivisation, environmental restructuring, and modelling as relevant intervention functions to facilitate program implementation. Five months after the intervention we have improved number of TB contact investigation to bacteriologically confirmed TB cases from zero to 61 and provision of TB preventive treatment to child contact from 4 to 67.

Conclusion

Systematic identification of barriers and facilitators of a health program is a high research priority to overcome implementation barriers and actualizing the benefits of a public health program.
Towards responsive health care systems for chronically ill patients: a patient-provider perspective in rural Malawi

Introduction: Chronically ill patients require extended interactions with health care institutions and support beyond clinic environment, in order to better manage their conditions. The double burden of HIV/AIDS and rise in chronic non-communicable disease (NCDs) in Africa, calls for more responsive health systems that are capable of meeting care demands for patients with long-term conditions, and accessible to all. Patient-centred care and patient self-management are critical elements in chronic care, and are advocated as global strategies. Furthermore, patient engagement in care calls for active participation in health decisions, and empowerment with appropriate knowledge, skills and resources to take action. In Africa, there is need for more evidence on how these practices are implemented and integrated in the delivery of chronic care, especially at primary health care level.

Aim: To explore how patients with chronic conditions are engaged in care, facilitators and barriers towards the delivery of patient-centred care in a resource-constrained setting.

Methods: A mixed-methods research conducted in one rural district in Malawi. Data included a longitudinal survey of 140 patients; 26 interviews with patients and health providers; four focus-group discussions with patients; and structured observations in four health facilities. We used a thematic approach for qualitative data analysis, and descriptive statistical analysis performed on survey data.

Results: Patient active engagement in clinical consultations varied due to: level of patient preparedness for clinic visits; provider workload and technical competence; communication and information dissemination approaches. Initiatives to deliver patient-centred care included offering integrated services (combined diabetes-hypertension clinic) and using clinical guidelines in delivering holistic care (palliative care clinic). However, these efforts focussed on secondary level care and were provided for selected conditions. NCD and HIV comorbid patients were more disadvantaged in their access to healthcare, as they experienced frequent drug stock-outs in public health facilities and incurred additional costs when referred. These barriers contributed to delayed care, poorer treatment adherence, and likelihood of poorer treatment outcomes. In efforts to extend care at community level, patient support groups and expert-patients (though mainly for HIV), were instrumental in providing self-management education, psychosocial and livelihood support, promoting positive living and healthy lifestyles.

Conclusion: While Malawi strives to provide universal health care for all, our findings point to the need for more efforts to increase resources and decentralise integrated health services that are accessible to all at primary health level.
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Poster Number: 40

**Stratification and characterisation of complex medico-psychosocial conditions at primary health care level in Eastern DR Congo: innovative methodological approaches**

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**Background**

The importance of considering health through the lenses of medico-psycho-social dimensions is paramount at primary health care level. However, there is dearth of evidence-based stratification of health conditions using such dimensions in low- and middle-income countries. This impedes the characterisation of different medico-psychosocial sub-populations particularly in resource-constrained countries, hindering universal health coverage and the progress towards the health sustainable development goals. This study aimed to suggest a rigorous approach to stratifying complex medico-psychosocial conditions (CMPSCs) and understanding their natural history in adults with chronic diseases, mother-infant pairs with malnutrition, their informal carers and neighbours in post-war eastern DR Congo settings.

**Method**

We are conducting a community-based cohort study in adults with diabetes or hypertension, mother-infant pairs with acute malnutrition and their informal caregivers and neighbours in four rural and two sub-urban health areas in South-Kivu Province, Eastern DR Congo. Participants have been identified through health centres record review and active community health workers search. Pre-tested structured enrolment questionnaires, WHO Disability Assessment Schedule 2.0 (WHODAS), Diabetes self-efficacy management scale, and the Medical Outcomes Study Social Support Survey (mMOS-SS) questionnaires have been administered by trained data collectors. Participants will be followed up as per 6 months scheduled visits. Principal component analysis with clustering will be run on social determinants of health, clinical factors, WHODAS and mMOS-SS scores to determine the CMPSCs levels at baseline. We shall use the R markovchain package for analyses and predictions of CMPSCs trends over time. To identify the predictors of CMPSCs patterns, we shall fit multilevel mixed-effects regression models to account for repeated measurements in the same individual and possible variability in CMPSCs determinants by health areas. In addition to statistical predictions, we shall study the dynamic of CMPSCs through a two years follow-up period by agent-based modelling (ABM) using NetLogo software.

The agents under this study will include mother-infant pairs with acute malnutrition, adults with multi-morbidities and health centres. We shall integrate the role of history and conditional if-then rules in ABM to account for the inherent contextual and human factors in development of CMPSCs.

**Results and discussion**

Results of the initial data collection will be ready by August 2018 and presented at the conference. Well-defined complex MPSCs strata could ease understanding of their evolution patterns and predictors, foster efficient service delivery for those most in need and enhance quality of life at individual and community levels in DR Congo and other post-war countries.
Poster Abstracts

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Poster Number: 41

Barriers and opportunities in advancing Uganda’s health system to deal with cardiovascular diseases burden: A case study of two districts

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Background

In many developing countries, the contribution of non-communicable diseases (NCDs) to the disease burden is steadily rising amidst the high prevalence of communicable diseases. Among these, cardiovascular diseases (CVDs), the number one killer in both developed and developing countries, contribute the highest burden. Unfortunately, in Uganda like many other developing countries, the health system is not adequately prepared to deal with this burden. This study explored the health system barriers and opportunities in the prevention, care and management of CVDs in Mukono and Buikwe districts in Uganda.

Methods

The study involved four group meetings with 24 stakeholders at different levels including health workers, administrators, political leaders and data managers. In addition, 4 key informant interviews were carried out with health facility in-charges. Meetings, interviews and discussions were audio recorded, transcribed verbatim and thematically analysed.

Results

Several barriers and opportunities for CVD prevention, care and management were noted across the building blocks of the health system. Under these blocks, the barriers were: Leadership / governance – lack of policies and guidelines for CVD prevention, care and management; Service delivery – lack of risk factor screening at lower level health facilities, management of CVDs being concentrated in higher level facilities, lack of transportation, and poor referral and patient follow up mechanisms; Human resources – few health workers with limited capacity to manage CVDs and poor attitudes of health workers in dealing with CVDs and their risk factors; Medical products and technologies – unavailability of required medicines, testing kits, diagnostic equipment and limited laboratory capacity; Financing – underfunding from government and lack of prioritization of NCDs generally; Health information systems – poor systems of record keeping and tracking and follow-up of patients.

Opportunities were: extensive distribution of health facilities within the study districts, availability of health workers with basic knowledge and skills in CVD care and management, CVD specialists with advanced training, draft policies with emphasis on CVD prevention, care and management, outreachs and basic equipment for non-laboratory screening, and accessibility to countrywide and district CVDs data to guide evidence based decision making.

Conclusions

Several challenges are stifling the capacity of the health system to provide prevention, care and management services for CVDs in this low income context. Strategies are needed to address the barriers and take advantage of available opportunities in this setting to ensure that those with CVDs and its risk factors are not left behind by the health system.
Systematic screening of Childhood pulmonary TB through gastric aspirate collection in primary and secondary health care facilities in Tribal Chhattisgarh, India: a feasibility study

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Background: Paediatric TB constitutes 10–20% of all TB in high burden countries. According to TB India Report 2014, 5% of all new cases were children. There is a rapid progression from infection to disease among children. To improve notification and to know true burden in the community early diagnosis of paediatric tuberculosis is important. In Chhattisgarh limited access to diagnostic techniques leads to low notification of paediatric TB cases. Gastric aspiration is one of the procedure recommended by Revised National Tuberculosis Control Program (RNTCP) for microbiologic confirmation. Unfortunately this, Broncho Alveolar Lavage, and Induced sputum are limited to tertiary centres. This study was done in an effort to improve diagnosis and care of Paediatric Tuberculosis at public health facilities below tertiary level of public health facility.

Methodology: The study was conducted from November 2016 to December 2017. One day training was organised on systematic screening of presumptive pulmonary TB along with hands on demonstration of Gastric Juice Aspiration to Medical Officers, Nurses and Auxiliary Nurse Midwives from 48 Primary Health Centres (PHC), 10 Community Health Centres (CHC), and 1 District Hospital. Samples were tested by Cartridge Based Nucleic Acid Amplification Test (CBNAAT) at District Headquarter.

Results: Out of all 0 to 10 years OPD attendees 0.49% (540 out of 109,712) had presumptive TB included in this study. Out of presumptive 85.2% (460 out of 540) were eligible for gastric aspirate. Those who were eligible, gastric aspirate samples were collected from 81.5% (375 out of 460) patients. Hence acceptance rate among parents for the test was observed to be 81.5%. 0.85% (3 out of 375 gastric aspirates) had TB on CBNAAT testing. 18 paediatric samples were collected in pre-intervention period (i.e. April to October 2016) and 567 during the intervention period (November 2016 to December 2017). 75.15%. (426 out of 567) samples were sent from CHC and PHC.

Conclusion: Accessibility and feasibility of this intervention is quite encouraging in community and at peripheral facilities. Majority of gastric aspirate samples were sent from secondary and primary institutions. Yield was very low. This may be due to lack of quality in screening presumptive paediatric cases, training, specimen collection and/ or transportation. There is scope for sensitization of all doctors along with paramedics to improve paediatric TB care and notification both at public and private health care facilities.
Community-based Health Planning and Services in Ghana: Improved access to and utilization of primary health care services through multisectoral planning and engagement

Co-authors: Joyce Ablordeppey-USAID Systems for Health; Koku Awoonor-Williams-Ghana Health Service; Marni Laverentz-USAID Systems for Health

Community-Based Health Planning and Services (CHPS) policy in Ghana is designed to significantly reduce health inequalities and improve delivery of high-quality primary health care services by removing geographical barriers and increasing community participation in health decision making. Updated in 2016, the CHPS National Implementation Guidelines outline 15 steps for the joint planning and execution of CHPS by a multi-sectoral group of stakeholders from the district and sub-district as well community leadership and other citizens. These steps provide detailed guidance for planning and demarcation of a CHPS zone, conducting community entry, constructing/securing a building, posting staff and volunteers and launching a fully functional CHPS zone.

The USAID-funded Systems for Health project supports the Ghana Health Service (GHS) to implement the CHPS strategy in five regions of the country; providing technical support to the GHS, communities, local government representatives, and other partners to advance along the 15 steps of CHPS functionality. Conducted collaboratively with GHS, core elements of technical assistance help different stakeholders to understand and realize their roles and responsibilities in successful CHPS implementation. Community Health Officers receive mentoring to not only provide health services, but also to effectively engage community members and manage local resources. Community Health Management Committees (CHMCs) are trained and coached to serve as a link between traditional leaders and the health sector, to mobilize resources for service delivery, and to support the establishment of community emergency transport systems. Technical assistance also helps communities conduct outreach and sensitization to increase awareness and support for CHPS among community members.

Preliminary results from this technical assistance show 49% of 483 supported CHPS zones completed at least 3 new steps in 2017. This translated into strengthening and/or reactivation of 394 CHMCs, as well as mobilization of outside resources by 319 CHPS zones to support improved outreach and service delivery. Furthermore, key service delivery indicators are improving with an increase in the number of suspected malaria cases tested from 83.6% to 96.6% and a 24% increase in child welfare clinic registration from 2016 to 2017.

These promising results indicate that advances in the 15 steps, particularly related to enhanced stakeholder knowledge and participation, may be contributing to sustainable improvements in access to and utilization of primary health care services. Continuous monitoring of service data and feedback from field experiences will help implement contextualized solutions to increase equitable access to preventive and curative services.
Applying Research to Ensuring the Effective Utilization of Research: The Community-based Health Planning and Services (CHPS) Initiative in Ghana

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Background: Over the four decades that have elapsed since Alma Ata, health policy in Ghana has been grounded in the goal of achieving universal access to primary health care, with strategies guided by implementation research. A program emerging from health systems research, known as Community-based Health Planning and Services (CHPS) experienced very gradual progress in expanding coverage until 2008 when a combination of policy change, leadership development, and political commitment accelerated implementation progress. This paper summarizing the history of community-based primary health care development. It begins with a synopsis of the design, structure, or functions of a small-scale plausibility trial in Ghana that deployed paid professional community workers to pilot areas and then employed a program of implementation research to refine and develop national policies for scaling up core strategies of this approach nation-wide. Although CHPS scale-up was initially unacceptably slow in most districts, a plausibility trial was launched in 2010 to develop and test means of accelerating community health service scale-up. By 2016, evidence from this trial showed that its strategies accelerate access to primary health care and reduce childhood mortality. In response, a new project is being launched that will test ways to optimize the utilization of this success for accelerating national scale-up of community-based health services.

The method: Implemented as in-service training for district managers, supervisors, and frontline workers, CHPS was initially rolled out in all of Ghana’s districts. This approach was subsequently augmented in two advanced implementation districts that conducted field demonstration sessions for visiting teams comprised of managers, supervisors, and community worker who were teamed with CHPS counterparts.

Results: Monitoring results show that the pace, integrity of content, and coverage of CHPS implementation was dramatically accelerated in 2008, a possible outcome of high level political support for implementation and associated regional and district leadership focus on making CHPS work. Coverage not only increased, but comprehensive statistical analysis of sample survey data show that household access to CHPS services has had a pronounced impact on the survival of children.

Discussion: This paper describes the evidence underpinning CHPS implementation model and research strategies for building further progress with community-based care. The design and baseline research of a replication study illustrates practical means of researching the utilization of research.

Conclusion: Ghana’s successful application of research to program develop is potentially relevant to community health service system development elsewhere in Africa.
Situation analysis on a new effort for maternal health at Upper West Region in a rural Ghana

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A free maternal health care policy, which started in Ghana in 2008, has been implemented through the National Health Insurance Scheme aimed at facilitating access to free and quality maternal health care services such as antenatal, delivery and postnatal care at health facilities. This policy accelerated pregnant women to go to health facilities, however, the utilization rate of health facility is lower in rural areas than in urban areas. To break through this situation, some rural communities began a new maternal health system collaborated with the local government in the last few years. They assigned a midwife to a health post (CHPS), where, in general, only assistant nurses are allocated. We conducted a cross-sectional study to understand the current situation at Upper West Region, where is one of the rural and poor regions in Ghana in 2016. We interviewed women who delivered a baby in the last year. We systematically selected communities matched into the criteria in three linguistic area in Upper West: communities near CHPS, communities near CHPS with a midwife, communities near health center, communities without health facility in their neighbor. The results showed that the utilization of CHPS compound for delivery was highest at communities near CHPS with a midwife (49%) and also communities with CHPS without midwife (42%, the local government recommends them to deliver at health center). On the other hand, there was not a big difference in the rate of home delivery among the four types of communities (14 to 20%). A uniqueness was found that about 10% of pregnant women in communities near health center delivered. About half of pregnant women compelled to pay some amount to buy medicines, disinfectants, sanitary mats and so on. However, there was not statistical difference in payment between pregnant women who held health insurance and those who did not hold. This study found that a new local health system to assign a midwife on CHPS well functioned, but there are still some spaces to be improved. Future study may be helpful to focus how pregnant women in communities without health facility in their neighbor maintain low rate home delivery rate.
Mawuli Kushitor, University of Ghana
Poster Number: 46

Sustaining Community-Based Health Planning Services (CHPS) through community volunteerism, evidence from North Tongu District of the Volta Region, Ghana.

Co-authors: Mawuli Komla Kushitor-University of Ghana

Following the Alma-Ata Declaration of 1978, health care systems across developing countries began to initiate processes to develop bottom-up intervention approaches to improve the accessibility of health care to underserved areas. Like in many African countries, The Community-based Health Planning and Services (CHPS) in Ghana recruited and trained volunteer workers to carry-out a variety of health promotion, case-management and service delivery within communities. While several studies have been conducted since the inception of CHPS in Ghana, most of the studies have focused on the challenges of CHPS in delivering health care to the community, very few studies have provided evidence-based solutions to widely reported challenges of community volunteerism in Ghana. In the face of limited financial and material resources, we provide evidence from the North Tongu District of the Volta region of Ghana, where the district health directorate successfully engaged community volunteers at various levels to improve health care accessibility in the district over a period of five years. Data collection was carried out in April, 2017. Ten Focus Group Discussions were conducted with CHPS supervisors, community volunteers, and Frontline workers such as Community health nurses and Officers. Twenty-two health officers took part in the study. The study applied thematic content analysis. Community volunteers recognize two different time periods of Volunteerism. The period between 2005 to 2010 and the period after 2010 to date. Time periods are marked by changes in health administration at the district level. While volunteers admitted that financial rewards were not provided during both periods, the recognition of their work kept them going for as long as their contribution to health care was valued. By invitation to regular monthly sessions and meetings, they felt being a part of the health care system. Also, a report submitted by volunteers in the communities were required by the health directorate for analysis. As long as the hospital requested for their weekly reports on diseases in the communities, they knew they were making a positive impact on health care. The directorate reciprocated the efforts of the volunteers by appreciating them with parties on important occasions. With a change in administration, the volunteers were sidelined, and have since felt alienated by the process. As at the time of data collection, health volunteerism had totally collapsed in some locations. Findings from the study demonstrate that community volunteerism can be sustained with the right attitude even in the face of limited resources.
What Do You Do With Success? The Science of Scaling Up a Community Health Systems Strengthening Intervention in Ghana

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Background. The completion of an implementation research project typically signals the end of research. In contrast, Ghana has embraced a continuous process of evidence-based programming, wherein each research episode is followed by action and a new program of research to monitor and guide the utilization of lessons learned. This paper reviews the objectives and design of the most recent phase in this process, known as a National Program for Strengthening the Implementation of the Community-based Health Planning and Services (CHPS) Initiative in Ghana (CHPS+).

Description of the intervention. A process of exchanges, team interaction, and catalytic financing accelerated the expansion of community-based primary health care in Ghana’s Upper East Region. Using two Northern and two Volta Region districts the Upper East Region’s systems learning concept will be transferred to counterpart districts where a program of team-based peer training will be instituted.

Methods. A mixed method evaluation strategy has been launched involving: i) baseline and endline randomized sample survey with 247 clusters dispersed in 14 districts of the Northern and Volta Regions to assess the difference in difference effect of stepped wedge differential cluster exposure to CHPS+ activities on childhood survival, ii) a monitoring system to assess the association of changes in service system readiness with CHPS+ interventions, and iii) a program of qualitative systems appraisal to gauge stakeholder perceptions of systems problems, reactions to interventions, and perceptions of change. Integrated survey and monitoring data will permit multi-level longitudinal models of impact; longitudinal QSA data will provide data on the implementation process.

Results: Findings from the successful trial of strategies for accelerating CHPS coverage with health systems strengthening inputs will be reviewed, with particular focus on statistical results showing that the combined effect of strategies reduced neonatal mortality by over 50 percent owing to the pronounced impact of project interventions on CHPS coverage. Results of baseline CHPS+ research will be reviewed to demonstrate contextual factors that must be addressed in the course of implementing CHPS+ research for fostering the utilization of research.

Discussion. CHPS+ combines mixed method research with national and regional program management to generate a system of embedded science for ensuring that results will foster a utilization process rather than a set of reform policies that must await an end-of-CHPS+ report.

Conclusion. CHPS+ demonstrates a paradigm for applying research to the goal of maximizing the utilization of trial results for large scale community health systems reform.
Who Knew? Achieving Family Planning Goals through Universal Health Coverage

Co-authors: Jeanna Holtz-Abt Associates; Intissar Sarker-Abt Associates

Universal health coverage (UHC) has become a visible global movement that presents opportunities to advance family planning goals. The family planning community has a keen interest in whether and how the full range of contraceptive services can be made accessible, particularly to underserved populations such as youth or the poor, within broader initiatives that aim to achieve UHC.

This paper describes common approaches used to finance health within the context of UHC and health systems in transition, and the significance of these approaches for family planning. A main focus is on the role of private health providers and the mechanisms used to pay them in low- and middle-income countries. In particular, the paper details, through desk and field-based research, trends and implications of growing government-sponsored health insurance schemes for private providers of family planning services. It reviews the extent to which government-sponsored health insurance schemes provide coverage for family planning, and the opportunities and risks these schemes present for private providers to participate in them. It also compares and contrasts features of two dominant provider payment mechanisms, fee-for-service and capitation, and examines intended and unintended consequences of each mechanism for providers and their clients. Finally, the paper discusses the unique intersection of provider payment approach with method choice for family planning clients.

The target audience for this paper is policy makers, implementers and development partners working on family planning and health financing initiatives. Key messages include:

- Making progress toward UHC and satisfying unmet need for family planning is a long-term process fraught with challenges, but one that can be accelerated.

- Health insurance schemes often initially exclude some or all family planning services, but also present an opportunity for vertical family planning programs with declining or unstable funding to integrate into broader, expanding programs that support UHC.

- The private sector is an important source of family planning services in most countries.

- Payment mechanism, payment amount and out-of-pocket costs borne by clients influence the extent to which they can genuinely choose the family planning method of their choice.

- There is no perfect provider payment approach; each presents pros and cons for purchasers, providers and clients.

The paper concludes by recommending how family planning advocates can champion better coverage of family planning by building the evidence base, promoting inclusion of private providers, and gaining a better understanding of the concepts and language of health financing.
Choose NEAR: A multiphase needs assessment to identify evidence-based tools for community health workers

Co-authors: Gratiana Fu-University of Michigan; Srishti Agrawal-University of Michigan

According to USAID, 21,000 more Basotho people were infected with HIV in 2016, contributing to the country's 25% prevalence rate, the second highest in the world. The shortage of clinical healthcare professionals in Lesotho also means that for every 1000 Basotho people, there is less than 1 medical provider available to service patient needs. Though community health workers (CHWs) have been mobilized to fill the labor gaps, few concerted efforts have been made to evaluate if CHWs have the necessary resources to effectively care for patients or the adequate support to maintain healthy lives. We will address the lack of understanding and knowledge of the needs of CHWs, specifically those in Lesotho who are providing care to HIV/AIDS patients in rural areas.

We will survey Basotho CHWs to find key indicators that both aid and hinder them in delivering HIV-related care. With this data, we will build an evidence-based tool to aid CHWs in identifying existing solutions that will expedite and support their role in care delivery in addition to a workforce database to document and monitor CHW work in the country. Using this resource, stakeholder organizations will be able to assess gaps in healthcare delivery, workforce equity, and accessibility in order to address existing systemic challenges including structural, social, economic, and political determinants of health. This is in accordance with one of the key action points from the first International Symposium on CHWs held in Kampala last year.

By identifying and utilizing existing tools and networks of care amongst NGOs and research institutions, we will encourage cross-institutional collaboration to recommend appropriate support mechanisms for CHWs. We expect to see less dependence on foreign aid to improve health outcomes by identifying and servicing the needs of CHWs and to open collaborative dialogue amongst stakeholders and governing bodies to reduce costs by pooling resources and maximizing health outcomes in HIV care.
Miniratu Soyoola, Health Partners International, a DAI Global Health company (based in Sierra Leone)
Poster Number: 50

Building blocks from below: community engagement, social change, health systems and the Sustainable Development Goals – moving from evidence to scale.

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Community health platforms form a critical link between the population and the health system; they can potentially drive social change to help achieve the SDGs. But is this vision realistic? This paper presents the evidence from innovative and empowering approaches to community engagement and shares experiences of how they have been embedded in health systems to achieve greater impact and sustained change.

The potential of community health programmes to drive social change is underutilised despite the existence of evidence to indicate their impact. Studies conducted by Women and Children First and Health Partners International/DAI Global Health covering a range of different countries and contexts, such as Bangladesh, India, Malawi, Nepal, Nigeria, Ethiopia and Zambia have shown substantial effects on maternal and neonatal mortality, as well as skilled birth attendance, and use of antenatal and postnatal care. These are positively correlated with approaches such as participatory learning action and inclusive community engagement which also promote empowerment of communities and social change.

The purpose of this presentation is to illustrate how community platforms can indeed drive social change and become linked more strongly with health systems to help achieve the SDGs and particularly to help address inequity and reach every individual in society. A brief summary of the research and current practical country examples from Northern Nigeria, rural Zambia and South Sudan will be shared.

The examples show how long-standing relationship-building with national and local governments, health facilities and community platforms helped to build the foundation for expansion of interventions that meet communities’ needs. In Northern Nigeria, this is now addressing the shortage of female health workers in the region; in rural Zambia, the initial agenda around maternal and newborn health is now being expanded to include early treatment of suspected severe malaria in infants and young children – a major killer in the country; and in South Sudan, where persistent gender inequality and social exclusion leads to unequal access to services and poor health outcomes for women, children and socially excluded groups, the community systems approach taken in Zambia and Nigeria is now being introduced through implementing partners based on a locally adapted strategy.

The target audience includes community members, development practitioners and policy makers interested in developing transformative community platforms as an integral part of the health system.
QUALITY IMPROVEMENT IN COMMUNITY HEALTH: A NOVEL APPROACH TO IMPROVE EFFICIENCY AND OUTCOMES OF CHW PROGRAMS IN KENYA

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Introduction

Critics of community health worker (CHW) programs often cite lack of data on quality of care, poor performance and limited effectiveness in improving health outcomes as a reason for not investing in scale-up. Quality improvement (QI) is an approach that has been used to strengthen these dimensions in health facilities through simple, robust approaches to local data use and analysis. Few studies have applied or assessed QI in CHW programs or its outcomes. We tested the feasibility and outcomes of implementing QI in community health programs in Kenya.

Methods

We implemented a QI intervention and evaluated it using a pre and post study design in community units in Nairobi, Kenya between October 2016 and July 2017. We developed a simplified QI curriculum, setting up four community work improvement teams (WITS), training and mentoring them on QI principles of problem identification and prioritization. The 8 to 12 member WITs consisted of CHWs, community members and link health facility staff from each unit. Quantitative data were collected through tracking CHW reporting rates. Qualitative data were collected through 26 in-depth interviews (IDIs) with WIT members and health workers and four focus group discussions (FGDs) with CHWs and community members at baseline and 12 IDIs and nine FGDs at endline to explore perspectives on QI in community health and its outcomes. Interviews were recorded, transcribed and analyzed using a thematic framework approach with the assistance of NVivo10 software.

Results

Reporting rates increased from 64% to 94% among CHWs in the units with reported improvements in quality of data collected and utilization for feedback to the community during dialogue days. Participants found the QI approach simple, acceptable and aligned to their work. At endline, WITs were able to demonstrate understanding and application of QI principles: root cause analysis for problem identification and prioritization to develop action plans. Reported changes in health service outcomes were increased utilization of mother and child services in facilities due to improved referrals and reduction of tuberculosis and immunization defaulters from facilities. Community members appreciated that WITS provided an opportunity for communities to give feedback to facilities on quality of services.

Conclusion

We demonstrate that CHWs can learn and apply complex QI concepts in a rigorous manner once they are adapted to their context. By applying QI, CHWs are able to dramatically improve reporting, community engagement with the health system, efficiency and performance by focusing on priority issues which improve health outcomes.

Co-authors: Aliya Karim-Swiss TPH; Don de Savigny-Swiss TPH; Daniel Mäusezahl-Swiss TPH

Integrated Community Case Management (iCCM) is an equity-based approach to childhood illness designed to provide children in remote areas of LMICs with access to case management for pneumonia, diarrhea, and malaria through Community Health Workers (CHWs). The RAcE iCCM program, implemented in Malawi, DRC, Abia, and Niger, Nigeria, emphasizes building country ownership and capacity for catalyzing scale-up of iCCM activities.

There is currently little evidence documenting how health outcomes are influenced by differences in the way iCCM programs are organized and implemented, or how the contexts of program actors affects these outcomes. This research series aims to explore how iCCM programmatic differences spanning the areas of policy, data systems, supply chain, and community and social mobilization (CSM), influence the effectiveness of iCCM and subsequent health outcomes for children.

We conducted a systems effectiveness mapping, and examined CSM strategies of these programs to gauge their effects on awareness, behavior, engagement, ownership and sustainability, and how these translated to produce program “effectiveness”. We employed a mixed-methods approach using data from 3000 surveys and 46 focus group discussions with CHWs, supervisors and caregivers; routine monitoring data; and population and geospatial data. Key informant interviews were conducted with traditional leaders, village health committee (VHC) members, and ministry actors.

Each mobilization strategy was different, with some resulting in significantly greater success than others. While all four programs relied on revitalizing VHC structures, success in this area was haphazard, and dependent on engagement with district managers to stimulate political ownership. This was compounded with consistent implication of local and traditional leaders to engender not only program uptake and acceptability, but integrating the program as an expected component of the health system. VHCs and other committees were essential to building accountability and enforceability mechanisms.

The typical CSM emphases on acceptability and awareness were significantly less important; strategies that focused on empowerment, relationships, and holistic local ownership observed the greatest impact. Programs that had a designated individual dedicated solely CSM initiatives observed the most program success in terms of overall careseeking, CHW satisfaction and retention, and the development of sustainable financial structures. The projection of building sustainability from the outset of the program favored robust community uptake.

There are a multiplicity of components to consider when designing CSM strategies. The pillars of CSM must be broadened to include a comprehensive and preemptive approach to ensure that community-based initiatives are not only functional and effective, but sustainable.
Collaborative action, local impact: How working as a collaborative public health system improves outcomes for local communities

Co-authors: Sandra Davies-Champs Public Health Collaborative; Matthew Ashton-Champs Public Health Collaborative; Dawn Leicester-Champs Public Health Collaborative; Tracey Lambert-Champs Public Health Collaborative

“Champs is the most coherent and positive collaborative way of working I have seen” Professor John Middleton, President of the Faculty of Public Health, March 2017

Champs Public Health Collaborative (Champs) has developed a comprehensive and systematic approach to improving public health priorities by large scale action and working together as system leaders across Cheshire and Merseyside (C&amp;M). Champs is a long-standing collaborative of eight Directors of Public Health serving 2.5 million people in C&amp;M, who also have a strategic influencing role within Liverpool City Region and Cheshire &amp; Warrington. It works on key priorities agreed with NHS England and PHE as a public health system. The Collaborative is facilitated by a small support team.

Champs has achieved measurable improvements in tackling high blood pressure, suicide prevention, mental health and wellbeing and collaborative commissioning. It also provides a learning programme for public health teams and sector led improvement underpins all of the collaborative work.

Champs works to the ethos of ‘collaborative action, local impact’. Rather than being spread thinly over a wide range of public health issues, it tackles a number of priorities that are common to every area and where progress can be best made through collective action.

One example is the tackling high blood pressure work with the Fire &amp; Rescue Services in C&amp;M who, thanks to a successful bid Champs made to the British Heart Foundation, are now trained and have the equipment to take blood pressure measurements as part of their “Safe &amp; Well” home safety visits. This has enabled the identification of vulnerable people who may be at risk of serious illnesses.

The suicide prevention programme is an example of best practice nationally and successes include the introduction of a suicide support service for anyone affected by suicide as they are particularly vulnerable to taking their own life. Real time surveillance has also been introduced which enables public health teams to identify “clusters” and develop a community response plan following a suicide.

Recent work with the Directors of Children’s Services identified self-harm as an increasing issue for children and young people and a new C&amp;M group has been set up to review evidence and put measures in place to help children and young people who may be most vulnerable.

Our symposium presentation would include more details of the work programmes above and our collaborative approach to improving health and wellbeing for all.
Empowering communities for health in Cambodia: lessons from the ground

Background: Government responsibility for community health in Cambodia is transitioning from health to local government in the move towards decentralisation. RACHA, a Cambodian NGO has been supporting this process in 411 communes and 4,444 villages across 6 provinces under a USAID funded project. This included building capacity and commitment of commune council officials to accept financial and management responsibility for community health, facilitating new working relationships between health facility managers and commune council, and building the capacity and motivation of village health volunteers (VHSGs). New social accountability practices involving citizens in monitoring health, education and commune council services has been introduced in over 200 communes.

Methods: The study reviewed secondary data collected under an independent mid-term evaluation which included interviews with RACHA management and staff; government officials at national, provincial and district level; commune council officials; health centre staff; and social accountability facilitators. Focus group discussions were held with VHSGs, community women and community men. The study also draws upon the findings of the end of project reflection led by RACHA that involved multi-stakeholder provincial level workshops.

Results: Commune councils declared their responsibility for community health in 97% of villages and their participation in health facility management committee meetings, which are a platform to share feedback from the community, increased exponentially. Commune council budget allocations for health remained minimal with the vast majority of funding allocated to infrastructure; national directives were one key factor. The limited education of commune council officials impacts their ability to request and settle expenditure. Village volunteers increased their activity in delivering primary level services but turnover is high given low financial rewards for VHSGs and better economic options; this applies to social accountability facilitators too. Social accountability processes have resulted in Joint Accountability Action Plans and high implementation of actions within the control of the commune and local service providers with citizen monitoring.

Political change and elections in 2017 have resulted in the significant turnover of commune officials and the need for fresh advocacy and capacity building.

Conclusion: Strengthening local governance for ownership and sustainability of community health, improving quality of public services, and citizen engagement is a long term agenda being impacted by the changing political, economic, socio-cultural context in Cambodia. Transferring responsibility without dedicated funding is increasing the fragility of community health functions that are pivotal in addressing national priorities such as neonatal mortality, child nutrition, adolescent health and TB control.
Developing a model for strengthening community health worker programme implementation in South Africa

Co-authors: Naomi Massyn-Health Systems Trust; Rene English-Health Systems Trust; Natasha Esau-Health Systems Trust; Jocelyn Muller-Health Systems Trust

Background:
In an attempt to overhaul the health system in preparation for the attainment of universal healthcare coverage through the eventual introduction of a national health insurance financing mechanism, South Africa recently introduced ward-based outreach teams (WBOTs) comprising mostly of community health care workers, led by a trained nurse. These teams primarily provide preventive and promotive care in the communities. District management structures provide high-level oversight with support from provincial structures. The aim of this study was to assess the degree of functionality and integration of the WBOTs into the primary health care platform in one district in South Africa, three years after initial implementation, and to provide recommendations for future scale-up.

Methods:
This was a mixed method study comprising of a desktop review, qualitative (focus group discussions, key informant interviews) and quantitative data collection (structured questionnaires). Data were collected from provincial, district and facility actors, including the WBOT team leader and community health workers. Thematic qualitative data analysis was conducted. A USAID Functionality Framework was used to guide data collection and analysis, as was a framework to determine factors influencing community health worker performance.

Results:
Areas for strengthening community health worker functionality and integration were identified and included recruitment approaches, clarification of roles and responsibilities, ongoing training related requirements, issues pertaining to supervision and documentation and information management. Using the Functionality Framework as the guide (that determined the ‘what’), a model for programmatic strengthening in preparation for scale-up was developed which drew on Brinkerhoff and Crosby’s policy implementation framework and focused on the ‘how’.

Conclusions:
Strengthening of community-based services through the introduction of WBOTs in South Africa requires ongoing implementation support that focuses not only on what is to be done to improve community health worker functionality, but also on ‘how’ it should be done. This will provide specifics in terms of implementation that extends beyond mere programme implementation to a broader systems implementation approach that takes into account actors, motivations and resources.
Correlates of knowledge and assessment skills related to the management of childhood pneumonia among public and private frontline workers in Uttar Pradesh, India

Lopamudra Ray Saraswati, RTI International
Poster Number: 56

Co-authors: Lopamudra Ray Saraswati-RTI International; Ashutosh Mishra-RTI International; Prince Bhandari-RTI International; Punit Mishra-RTI International; Ambrish Chandan-RTI International; Animesh Rai-RTI International; John Kraemer-Georgetown University; Margaret Baker-RTI International

In India, frontline workers (FLWs) – accredited social health activists (ASHAs) and rural medical providers (RMPs) – being the first point of contact of caregivers, play a pivotal role in early detection and prompt treatment of childhood pneumonia. The study was undertaken to assess the current knowledge and assessment skills related to management of childhood pneumonia among ASHAs and RMPs, and identify intervention strategies that could be used to strengthen them.

As part of a study to inform an intervention focused on reducing under-five mortality, we surveyed 473 ASHAs and 447 RMPs in six districts of Uttar Pradesh. While their knowledge was assessed using face-to-face interviews, their assessment skills were assessed using video vignettes. ‘Shortness of breath’ and ‘chest in-drawing’ were considered key signs of pneumonia. We used binary logistic regression (separately for ASHAs and RMPs) twice, first to assess the effectiveness of different information, education, and communication strategies in improving the knowledge of FLWs; and second, to identify strategies that are effective in improving the assessment skills of a subset of FLWs that knew about the signs.

Although 50.7% ASHAs and 41.6% RMPs reported to know at least one sign of pneumonia, 12.8% ASHAs and 11.3% RMPs could identify the signs from video vignette. ASHAs showed significant improvement in knowledge if they had met with a community resource person [Odds Ratio (OR)=1.97; 95%CI=1.00-3.91], or had received training on ASHA module [OR=2.58; 95%CI=1.54-4.34], or had obtained pneumonia-related information from television [OR=1.67; 95%CI=1.11-2.63]. We could not identify any factor that significantly affected the assessment skills of ASHAs. Among RMPs, pneumonia-related inter-personal communication from a non-government health worker [OR=2.14; 95%CI=1.31-3.52], pneumonia-related information from television [OR=2.28; 95%CI=1.45-3.60], and personally seeing at least one child with pneumonia in the last week [OR=1.64; 95%CI=1.00-2.70] significantly contributed to their knowledge regarding the signs. Among those RMPs that knew about the signs, being in older age-group significantly improved their assessment skills.

FLWs have poor knowledge and assessment skills required for appropriate case management of childhood pneumonia. While some of the existing intervention strategies seemed to work in increasing FLWs’ knowledge, none was effective in improving their assessment skills. Programs should explore innovative strategies for improving the assessment skills of FLWs, besides focusing on the existing knowledge enhancement strategies like frequent meetings with community resource person and training on ASHA module for ASHAs, messaging through inter-personal communication for RMPs, and use of mass-media for both.
Supporting renewed government commitment to community health in Uganda: Pathfinder International’s Approach to Integrated Systems Strengthening for Community Health Extension Workers (CHEWs).

Co-authors: Richard Dickens Kintu-Pathfinder International Uganda; Camille Collins Lovell-Pathfinder International

Purpose:

To support Uganda’s Ministry of Health (MOH) integrate its new Community Health Extension Workforce (CHEWs) into the health system to ensure equitable distribution of essential community and household-centered health services.

Content:

In 2001, Uganda initiated the Village Health Team (VHT) programme to address the gap in health services delivery between community and facility levels, shortage in health workforce and disease prevention. However, after 16 years, health indicators have remained poor, 75% of the disease burden are preventable (UDHS, 2016). Health facilities are disproportionately distributed, with the national average: 1 per 6,676 people, while rural: 1 per> 20,000 people. From the VHT assessment done in 2014, findings included; unclear recruitment process, VHTs largely funded by Non-Government Organizations, limited community involvement and weak linkage with the health system.

To address the above challenges, MOH introduced the CHEW program which will identify, train and deploy 15,000 remunerated CHEWs over the next 5 years. The Pathfinder’s ISS-CHEW project works in partnership with the MOH at national and district levels to roll-out the CHEW strategy in the first 13 districts.

Significance for community engagement:

Community entry: disseminated the CHEW strategy to sub-county leaders, Civil Society Organizations and district health management teams during one day-meetings. As a result, sub-county mobilization plans were developed, CHEW selection teams formulated for each parish and a schedule for CHEW selection was drawn.

Community mobilization; to optimize participation, radio talk shows and announcements were broadcasted. CBOs too played a role in community mobilization. As a result, 1,480 (740 Males, 740 Females) CHEW trainees were selected by communities, these will undergo a six-month training using the MOH curriculum. To ensure gender equity, consideration is being given to women’s participation in the semi-residential training and child care services.

Participation in health activities: Model households have been piloted in one of the 13 districts, CHEWs will be trained, identify and train model households in their respective parishes. Community-led health planning; annual health assemblies will be held in each parish to identify community health needs, assess CHEW performance.

Challenges included: Political interference in CHEW selection; CHEW allowance raised complaints from some health workers who feel underpaid, many experienced VHT were older and had less or no formal academic training; limited commitment from some district officials despite high interest from community members.

The project supports the Ministry of Health, District Health Management Committees, Health workers, CSOs and CHEWs.
Community Health Workers and Maternal Health: Evidence from a cluster randomized controlled trial in Jigawa, northern Nigeria

Co-authors: Vandana Sharma-Harvard T.H. Chan School of Public Health; Jessica Leight-American University; Martina Bjorkman Nyqvist-Stockholm School of Economics

Background: Though Nigeria is home to 2% of the world’s population, it accounts for more than 10% of the world’s maternal and child deaths. The highest levels are in the north, where instability, violence and population displacement as well as poor health infrastructure, and low maternal health services use contribute to poor outcomes. We conducted a cluster randomized controlled trial to assess the effects of three community health worker (CHW) interventions on maternal and newborn health in Jigawa, Nigeria.

Methods: The study was implemented in 96 clusters of communities across 24 Local Government Areas (LGAs) in Jigawa. Clusters were randomly assigned to four study arms: 1) training women as CHWs who provide education and referrals to pregnant women, 2) the CHW program plus distribution of safe birth kits to pregnant women, 3) the CHW program plus community dramas to change social norms related to maternal health, 4) a control group. Quantitative data were collected from a 15% random sample of households (N=7,069) at baseline, and again four years later. All births and maternal deaths across study communities during the follow up period were captured via an SMS based surveillance system. Post-birth questionnaires were also administered 3 days and 28 days after birth among the sampled households if a birth occurred during the study period.

Results: 4528 pregnancies occurred during the follow up period and only 20% of pregnant women in treatment arms reported ever receiving a CHW visit. Women in communities where the CHW programs were implemented were significantly more likely to have ever attended antenatal care (ANC), and on average attended more ANC visits than women in the control arm. Utilization of post-natal care was also significantly higher, but there was no effect on facility based deliveries or skilled attendance at birth, or on male presence during ANC or delivery.

Conclusion: The deployment of community health workers to educate women and provide information about the benefits of facility delivery increases utilization of some forms of maternal care, but had no effect on deliveries at health facilities.
Meghan Bruce Kumar, LVCT Health
Poster Number: 59

Measuring quality from a community perspective: Using a community follow up tool to measure the quality of community health services at household level in Kenya

Co-authors: Nelly Muturi-LVCT Health; Maryline Mireku-LVCT Health; Regeru Regeru-LVCT Health; Linet Okoth-LVCT Health; Victoria Doyle-Liverpool School of Tropical Medicine; Miriam Taegtmeyer-Liverpool School of Tropical Medicine; Lilian Otiso-LVCT Health

Background/Introduction
Quality of care is a key driver of improved health outcomes and effective health service delivery and is evidenced by client satisfaction. In Kenya, there is a growing need and focus on Quality Improvement (QI) at community level to improve uptake of health services. However, there is little evidence on mechanisms to track the quality of services delivered by close-to-community (CTC) health service providers. We sought to capture experiences of using a community home follow up tool to measure the quality of services provided by Community Health Volunteers (CHVs) at household level as a component of a community QI intervention in nine Community Health Units (CHUs) in Nairobi County, Kenya.

Methods
The community follow up tool was a program tool introduced to be used by community work improvement teams (WITS) to inform areas of improvement of CHVs work. The tool assessed basic information (household), Maternal Newborn and Child Health (MNCH) activities, communication and referral at household level. The tool was administered by community members not involved in health service provision selected by WITs. Households from where data was collected were purposively selected by the Community Health Extension Worker (CHEW) on the as having received a CHV visit addressing maternal and child health issues as reported in the previous month. At least two households for every CHV were visited. Qualitative data (nine in-depth interviews and seven focus group discussions) were collected among selected WIT members to find out the ease of use of the tool and quality problems identified from the tool findings.

Results
A majority of the respondents reported the tool to be easy to use and the data collected easily analyzed and interpreted. Challenges related to the use of the tool included arrangement of questions and language (English) instead of local languages. Quality gaps identified using the tool included the time CHVs took to conduct household visits (some were reported to take less than ten minutes in a household affecting the quality of services offered), gaps in CHV referral follow up and inaccuracy of the data collected by CHVs.

Discussion/Conclusion
The Community Follow-Up Tool can successfully be used to measure the satisfaction with health services provided by CHVs and can highlight priority areas for quality improvement. Furthermore, using the tool provides an opportunity to identify gaps in CHV capacity allowing support supervision and training to be tailored to their needs with the goal of achieving universal health coverage.
Deepthi Wickremasinghe, London School of Hygiene & Tropical Medicine  
Poster Number: 60

‘Their own project for their people’: Community participation in the Village Health Worker scheme in Gombe State, Nigeria

Co-authors: Deepthi Wickremasinghe-London School of Hygiene & Tropical Medicine; Barbara Willey-London School of Hygiene & Tropical Medicine; Ahmed Gana-Gombe State Primary Health Care Development Agency; Magdalyn Okolo-Society for Family Health; Yashua Alkali Hamza-Childcare & Wellness Clinics; Nasir Umar-London School of Hygiene & Tropical Medicine; Neil Spicer-London School of Hygiene & Tropical Medicine; Tanya Marchant-London School of Hygiene & Tropical Medicine

Background

Maternal mortality in Nigeria, at 560 deaths per 100,000 live births, remains stubbornly high and contributes to lack of progress towards the Sustainable Development Goals. In Gombe State, remote rural communities’ limited access to health services, hampers universal coverage. Low adult literacy restricts efforts to increase community participation for health, particularly among women. To help achieve universal coverage in services to improve the wellbeing of pregnant women, mothers and newborns, the Gombe State Primary Health Care Development Agency (SPHCDA) introduced in 2016 an innovative practice: the Village Health Worker (VHW) Scheme, supported by Society for Family Health (SFH). VHWs, a new cadre of trained, volunteer community-based female health workers, connect the community to health care services by promoting uptake of services, providing basic preventive care, and referring women with pregnancy or postpartum complications and sick newborns. Community participation, particularly through engagement with the Ward Development Committees (WDCs), incorporates community accountability for sustainable universal coverage.

Methods

To evaluate the scheme’s reach, we are analysing quantitative data from annual household surveys, starting in 2017. To evaluate its responsiveness to community needs and understand the scheme’s scalability and sustainability we are conducting qualitative interviews with community members, VHWs, supervisors, implementers and the donor every six months. Working with all stakeholders we use these quantitative and qualitative data to identify and plan for course correction opportunities.

Results

After six months of implementation, 24% of households reported at least one VHW visit. Only 5% of wards in the State reported coverage over 50%, while a quarter of wards reported coverage of less than 15%. In response, the SPHCDA and implementers are tailoring health service delivery to address these challenges. A key finding for the scheme’s scalability and sustainability is the high level of community engagement through WDCs’ willingness to support it, by sensitising husbands and families about how VHWs serve their community. Yet challenges remain for resourcing, recruitment, adequate VHW supervision and attrition of VHWs, through marriage, return to education or other employment opportunities.

Discussion / Conclusions

The reach of the VHW scheme showed variability by geographic area, coverage being lowest in hard to reach areas. Community involvement and State engagement are key contributions to the scheme’s scalability and sustainability. This session will present useful insights for policy makers and others in LMICs seeking to encourage community participation to create universal coverage of health services.
Designing community health services based on the community’s conception of health: evidence from the DRC

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Background. In Democratic Republic of Congo (DRC), child malnutrition rates are high: 43% of children under 5 years of age suffer from stunting and 23% are underweight; furthermore, most (60%) children 6-59 months are anemic (<11.0g/dl). This study aimed to provide guidance on programmatic efforts to strengthen counseling for infant and young child feeding (IYCF) practices, prevention of malnutrition, and referral and treatment of malnourished children in the context of integrated Community Case Management (iCCM).

Methods. This mixed methods study was conducted in four health zones in DRC’s Tshopo province. We performed in-depth interviews of mothers (N=48), fathers (N=21) and grandmothers (N=20) of children under 5 years of age to determine behaviors and perceptions around IYCF, illness, and care-seeking. Additional interviews were performed with facility-based health providers (N=18) and traditional healers (N=20), alongside focus group discussions (FGDs) with community health workers (CHWs) (N=7 FGDs, N=56 participants). Data were analyzed iteratively and collaboratively between DRC-based data collectors and remotely-based technical and methodological experts, using thematic analysis and coding of data with NVivo 11.

Results. According to community respondents, including family members and traditional healers, the concepts of children’s health, growth and nutrition are seen as inseparable. Family members did not distinguish between a healthy child and a well-nourished child, and connected growth, appetite, and good nutrition equally to a child’s well-being. Acute malnutrition, a rare occurrence, was seen as a shameful condition, posing a barrier to care-seeking for children with clinical symptoms of severe acute malnutrition (SAM). Community health services were ill-adapted to families’ needs in terms of understandings of etiology and accessibility, especially compared to traditional healers, who were more approachable – culturally, financially and practically – to sick children and their families. Traditional healers emerged as the “real” community health workers, in that they live nearby, are flexible about payment and appointment times, and treat both biomedical and spiritual diseases.

Discussion. Understanding health needs from the point of view of the community, both in terms of conceptualizing health problems and designing community-level services, is critical to addressing families’ needs and ensuring utilization of services when integrating preventative and curative components of nutrition and child health services. Our findings will contribute to developing understandings of the interface between communities and health systems, and how the latter can learn from – and shape themselves to better fit – the former.
Role of Community Health Workers in Ensuring Coverage of Home Fortification with Micronutrient Powder in Bangladesh

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Background: Household visits by community health workers (CHWs) are critical predictors of coverage and utilization of health services. The Bangladesh Rural Advancement Committee (BRAC), an international development organization based in Bangladesh, is a pioneer in using female volunteer CHWs, called Shasthya Shebika. In this paper, we assess the role of home visits by Shasthya Shebika in improving micronutrient powder coverage in rural Bangladesh and explore the independent and mediating effects of spatial client-provider proximity.

Methods: We used data from a baseline (n=1927), mid-line (n=1924) and endline survey (n=1,540) of an evaluation of a home fortification program. We defined two exposure groups based on at least one Shasthya Shebika visit in the 12 months preceding the survey, and defined contact coverage as a child ever fed food with micronutrient powder. We used geospatial coordinates to compute the proximity of respondents and their primary Shasthya Shebika. We also used multivariable logistic regression using the generalized estimated equation.

Results: We observed a significantly increasing trend in the coverage of home fortification with micronutrient powder from baseline to endline in the households visited by BRAC's Shasthya Shebika [32.4% (95% CI:29.5-35.4) at baseline, 51.7% (95% CI:48.4-54.9) at mid-line, and 76.4% (95% CI:73.0-79.4) at endline]. Multivariable logistic regression suggested that contact coverage was significantly higher in exposed households [AOR 2.54 (95% CI:2.03-3.18) at baseline, AOR 4.45 (95% CI:3.62-5.48) at mid-line, and AOR 6.34 (95% CI:4.94-8.14) at endline]. Participants residing further from their Shasthya Shebika had significantly lower odds of contact coverage. Additional predictors of contact coverage included caregiver age, child’s age, father’s education, and child’s sex.

Conclusions: Households that received a visit Shasthya Shebika had higher indicators of program coverage, confirming the importance of frontline volunteer CHWs. Notably, this relationship is partially mediated by the distance between the Shasthya Shebika and caregiver’s households, suggesting a need to (1) ensure client-provider contact, (2) increase density of frontline workers, (3) incentivize coverage, and/or (4) target furthest areas.
Creating a Forum for Shared Learning and Advocacy in Strengthening Community Health Systems: Lessons from Community-based Quality Improvement Teams in Kenya

Co-authors: Vicki Doyle-Capacity Development International; Lilian Otiso-LVCT Health, Nairobi, Kenya; Linet Okoth-LVCT Health, Nairobi, Kenya; Regeru Regeru-LVCT Health, Nairobi, Kenya; Nelly Muturi-LVCT Health, Nairobi, Kenya; Maryline Mireku-LVCT Health, Nairobi, Kenya; Anthony Mwaniki-LVCT Health, Nairobi, Kenya; Michael Kimani-LVCT Health, Nairobi, Kenya; Lynda Keeru-LVCT Health, Nairobi, Kenya; Meghan Bruce Kumar-Liverpool School of Tropical Medicine; Miriam Taegtmeyer-Liverpool School of Tropical Medicine; Judy Macharia-Nairobi County, Kenya; Carol Ngunu-Nairobi County, Kenya

Background
Kenya is in the process of scaling-up community health programmes with commitment from national and county governments and non-governmental stakeholders. But there are risks that rapid scale-up within a devolved context will compromise quality of services unless quality improvement (QI) approaches are embedded into community health systems at the onset. This requires simple, innovative capacity building and learning approaches for front line workers.

Methods
We supported the establishment of QI teams for community health services through training in QI methods, interspersed with periods of implementation and team coaching. An additional support element involved creating a space for collective sense making through hosting ‘learning events’. Nairobi County hosted the first event in October 2017 with 120 participants, twenty-four QI teams, two additional counties and participants from National MoH Departments for Community Health and Health Standards. A key aim of the event was to make it as interactive as possible and ensure all voices, from community members to policy makers could be heard. We used a wide-range of learning and sharing methods including plenary presentation and discussions, hand-designed poster presentations, panel discussion, peer assessment, QI awards and World Café. We purposely minimised the use of technology and PowerPoint presentations.

Results
Using a range of methods provided multiple avenues to engage participants. Community members and health volunteers took a prominent role in describing the practical reality of their work on the ground to policy makers and managers. Involving senior MoH officials, paired with community workers in judging team documentation and poster presentations provided them with insights and in-depth understanding of the work and achievements of community-based teams. Powerful interactions between QI teams from different sub-counties gave a sense of friendly-competition and healthy debate around how to engage communities and improve quality within existing resources. Whilst reported improvements in quality and performance of community health services were variable, teams were able to demonstrate that QI at community level is feasible and can have positive impacts.

Conclusions
The ‘learning event’ methodology demonstrated the importance of creating a space for shared learning and advocacy. Ultimately success of QI at community level will depend on how well community structures, support and tools truly embed into the health system. Shared learning, rewarding best practice and advocacy are fundamental to this process and can be achieved with modest resource investment. QI teams are spearheading a quality revolution in Kenya, starting where it matters most, with the community.
Sneha Lamba, Oxford Policy Management
Poster Number: 64

Evaluating the sub-center meeting platform as an intervention to improve the knowledge and motivation among community workers in Bihar, India

Co-authors: Sneha Lamba-Oxford Policy Management; Sam Franzen-Oxford Policy Management; Aarushi Bhatnagar-Oxford Policy Management

Context: The health sub-center meeting platform consists of monthly meetings designed to capacitate female community workers with technical knowledge, planning skills as well as improve coordination between the nutrition and health workers who work together on several programs (including Village Health Sanitation and Nutrition Days: VHSNDs). Knowledge, planning, review and coordination would then improve the quantity and quality of engagement with the population during home visits and VHSNDs. The goal for these meetings was to improve RMNCH+N outcomes in the population through greater community uptake of healthy behaviors and service utilization at outreach or facility level.

Objective: The objective of the paper is to investigate whether monthly meetings at the sub-center improve knowledge, and motivation among both health and nutrition community workers in Bihar, India.

Methods: Our paper uses a mixed-methods approach. We use representative health-system data from an independent data collection carried out by OPM covering 1400 community workers as well as block and district managers across 190 blocks in the Indian state of Bihar. Our data span four different cadres of community workers: Auxiliary Nurse Midwives (ANMs), Accredited Social Health Activists (ASHAs), Lady Supervisors (LSs) and Anganwadi Workers (AWWs) who are part of both the health and nutrition systems. This is combined with qualitative interviews with a non-representative purposive sample of district and block level managers as well as community workers across four districts in Bihar which informs some of the findings.

Findings: Results from multiple regression analysis carried out to explore the association between the frequency and participation in these meetings with the knowledge of workers finds that while the technical knowledge scores are significantly higher on content covered in these meetings compared to knowledge in other topics there is no significant association between participation and knowledge. Similarly, no significant associations were found between participation in the meetings and motivation of community workers. Qualitative findings offer some insights into these findings. We find that while meetings at the sub-center took place frequently and participation of the outreach workers was high, the meetings were likely to focus on administrative and procedural elements not unlike other institutionalized government meetings. These meetings were also largely unsupervised by the government managers at the district and block levels indicating lack of buy-in and ownership from government counterparts.

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Category of submission: Individual abstract

Format: Oral presentation

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Background – Disease outcomes in post-emergency settings are often sub-optimal. In Liberia, poor outcomes as a result of civil war were compounded by the 2014-2015 Ebola epidemic. The status-quo of health care delivery is failing such destabilized systems and the patients they serve, demonstrating the need for new methods and approaches.

Methods - Partners In Health committed to improving care delivery in Maryland County, Liberia post-Ebola by improving three high-volume clinical centers and employing 71 community health workers (CHWs) to provide treatment support to TB, HIV and leprosy patients. We simultaneously deployed a socioeconomic assistance program with three core components: (1) transportation reimbursement to the clinical centers; (2) food support packages; and (3) additional social assistance in select cases.

Results - After two years of the program’s implementation, an exceedingly low TB LTFU rate was observed, which dropped from 9.5% to 2.1% between the pre- and post-intervention period. TB patients enrolled post-intervention had an 82.5% treatment success rate, exceeding the national success rate of 77.0% recorded in 2016. Improved HIV outcomes observed between the pre- and post-intervention periods are also significant: retention of HIV patient enrollment increased from 63.9% to 86.1%; treatment coverage rose to 53.9% in PIH-supported districts (noteworthy when compared to national coverage estimated at 19% in 2016); and transfer out dropped from 16.7% to 1.9%.

Discussion/Conclusion - As the enthusiasm for CHWs grows among program implementers and governments, care should be taken to position and support CHWs so that they have the opportunity to succeed. Based on the findings of our program’s intervention, recommendations can be made for policy makers to consider adopting an integrated community treatment support model that addresses the target population’s socioeconomic vulnerabilities within MOH guidelines and national strategic plans. The Partners In Health approach in Liberia demonstrates how, with the right inputs, excellent clinical outcomes and a bridging of the rural health delivery gap are possible even in post-emergency contexts.
Community Lab of Ideas in Health: community as protagonists, co-creator and co-implementer of the malaria elimination project in The Gambia

Background:
Involving community in global health interventions has become common practice, however, the degree and quality of involvement is often inadequate. To give a fair floor to all actors including the community, this study in malaria elimination project in The Gambia provides space (lab) where the community and project share ideas to co-create and co-implement the project. The project, a randomised control trial on Reactive Household-based Self-administered Treatment (RHOST) treats both malaria patients and all individuals residing in the patient's household (possibly asymptomatic) to interrupt transmission in low malaria prevalence setting. Community plays a significant role to improve the effectiveness of the intervention.

Methods:
Anthropological study was conducted using mixed-methods to understand the local context, micro-politics of the community, health-related issues and burden of malaria, and to identify the key-informants. Using information from the study, the project-team and community repeatedly negotiated the relevance to implement the project and discussed obstacles and possible solutions, as we call it "Community Lab of Ideas in Health (CLIH)". Through CLIH, the project and community co-created the implementation strategies that are more appropriate to the local context and acceptable by the community members. The health-message was also developed based on the idea raised from the community and was disseminated by community key informants.

Results:
The project's aims and the community's needs were successfully merged together, resulting in creating the relevance for both actors to implement the project. Due to the anthropological study, the project could recognise the burden of malaria from the community perspective, and respect culture and micro-politics of the community. Through CLIH, the project developed the tailored implementation strategies and enhanced the existing health system by positioning Village Health Worker (VHW) at the centre of the project, improving their performance and increasing use of VHW by the community. Moreover, the bond based on trust was created among the project, VHWs and the community and consequently, improved health seeking behaviour, increased acceptability of the project followed by high adherence (92%).

Conclusions:
Knowing and respecting the community structure, culture, and micro-politics was crucial to tailor the project to the local context, and importantly to open the floor to negotiate relevance of the project implementation and community participation. Community is often "used" as a tool for global health interventions but rarely as a fair partner. With CLIH approach, community's voice and ideas were respected, and they were fully involved in the project as protagonists.
Health Forum Movement – A study on local health systems strengthening, West Bengal, India

Co-authors: Ketaki Das-West Bengal Voluntary Health Association (WBVHA); Biswanath Basu-West Bengal Voluntary Health Association; Sandip Bagchi-West Bengal Voluntary Health Association

Indian healthcare delivery system is a complex, riddled with multiple powerful players, lack of a common vision, very low public funding and a host of insufficiencies. Weak voice and low accountability are constraints to effective healthcare delivery. Rural healthcare is one of biggest challenges.

The National Health Policy 2017 explicitly addresses the issue of governance of health systems for the first time, acknowledging the multi-layered local health governance structures in rural India. Governance is an important factor in health system performance and is complex, poorly understood in India. Effective governance & accountability in health-sector faces conceptual, analytical and design challenges (Van Belle & Mayhew, 2016a).

Health governance lenses provide useful insights into the dynamics of health system performance and contribute to identify underlying institutional problems. The health governance framework proposed by Brinkerhoff & Bossert (2014) identifies three disconnects that constitute challenges for health system strengthening interventions.

In this context, the West Bengal Voluntary Health Association - a federation of NGOs) initiated the BHCS program since 2003. This program coordinated local NGOs to work together as a HEALTH FORUM to identify health problems and negotiate with the healthcare providers for resolution of these problems. The theory of change underlying this process is to develop the health system and the health services by reinforcing a learning cycle aiming at i) facilitating the implementation of government schemes, ii) adapt them to local circumstances, iii) share the learnings at grassroot level, iv) provide a feedback to the next level. The program achieved some success and today there are five HEALTH FORUMS which bring together 40 NGOs and cover 1.5 million people in remote rural areas. And also assists government in fulfilling its commitments to people by identifying operational/policy gaps and providing services in un-served/under-served areas.

A multi-stakeholder dynamic is developed to strengthen LHS by the HF. Their ability, power and willingness to fulfill their roles and responsibilities, leading towards distributed stewardship. The mechanisms and dynamics promoted by the BHCS program.

Two major challenges of HF are: (1) governance of health system and strengthening of health systems (health governance); and (2) joint action of health/non-health sectors, public/private sectors and of citizens for a common interest (governance for health).

HF Movement sheds more light on the nature and outcomes of the interactions between local governments and health services; and more insight on the place, role and voice of people in interfaces between politicians and health technocrats.
Community perspectives on Kangaroo Mother Care (KMC) in India


India accounts for the largest number of neonatal deaths globally. Causes related to preterm birth and low-birth weight represent about 35% of neonatal mortality[1]. Kangaroo Mother Care (KMC) is a critical, low cost intervention to reducing adverse outcomes in low birth or preterm infants. The Government of India is testing the feasibility and acceptability of KMC in select locations prior to a national roll out. JSI, as a consortium partner on the USAID funded Project Vriddhi[2], introduced KMC in one district each in Jharkhand and Uttarakhand. This paper presents assessment findings to fill a critical gap around factors that drive KMC uptake at the community level once mothers leave the facilities with their infants.

JSI conducted a midline assessment to examine acceptability and knowledge of KMC and its benefits within communities through key informant interviews with 28 mothers. Quantitative program data on breastfeeding, number of follow up visits after discharge, KMC coverage and duration of KMC were also analyzed.

Roughly 70% of infants born since program introduction were preterm. KMC coverage rose from 16% at baseline to 42% at midline. 90% of infants received breastmilk, most through the mother's breast. All mothers reported initiating KMC in hospitals and continuing at home. All mothers correctly described the key components of KMC and reiterated its benefits during interviews. On average, mothers reported providing KMC 2-3 times a day for 1.5 hours each time for up to 10 days. Mothers highlighted that mothers-in-law, and, occasionally, husbands released them from household tasks enabling exclusive time and privacy to provide KMC. Some husbands and mothers-in-law also reported providing KMC themselves while mothers ran errands. Mothers described a close relationship with community health workers who visited them regularly, reinforced the importance of KMC and often accompanied them to the hospital for delivery. Most mothers completed 2 follow-up visits after discharge. Challenges encountered when completing follow up visits included distance to the facility, limited transport options and disrespectful treatment by facility based nurses.


[2] Project Vriddhi is led by IPE Global
Strengthening district-level accountability systems to improve community results

Co-authors: Taylor Williamson-RTI/Health Policy Plus; Alyson Lipsky-RTI/Health Policy Plus; Anne Jorgensen-Palladium/Health Policy Plus; Sue Richiedei-Plan International/Health Policy Plus

Countries across the world are working towards achieving global commitments such as the Sustainable Development Goals, the promise of universal health coverage, and Family Planning 2020 (FP2020). Within decentralized health systems, implementation is difficult, and accountability systems that extend throughout the entire health system are critical. However, accountability systems that extend beyond the central level are often poorly understood and neglected. This presentation, targeted towards implementers and civil society, describes a participatory approach to understanding and strengthening local accountability systems.

Kenya, Malawi, and Uganda have all made FP2020 commitments, and are working toward the global goal of reaching 120 million new users of contraceptives. To support these efforts, over two years the USAID-funded Health Policy Plus (HP+) project implemented an approach based on a relationship theory of accountability systems (Brinkerhoff 2004) to improve local understanding and catalyze joint action to strengthen accountability systems for FP2020 commitments in select districts/counties. Implementation included participants from government, civil society, faith-based organizations, and implementing partners.

HP+ designed and implemented a four-stage process with cadres of women leaders from each country where participants at an accountability workshop identified a priority barrier to achieving FP2020 commitments and created a map of accountability relationships among health system actors with political, financial, and programmatic accountability roles for the issue. They selected key accountability linkages and customized interview guides they used to explore the relationships. The participants and local consultants analyzed the data collected from the interviews and held data validation meetings with select stakeholders. Finally, participants held a broader stakeholder meeting to discuss and prioritize recommendations.

Key findings from all three countries were that community-level actors did not know the extent of the relevant accountability system, and in two of the three countries, did not know how data and information are used to support programming. They also found a need for transparency around each of the priority issues. The stakeholder meetings yielded broader understanding of improving accountability linkages as a means of strengthening implementation and consensus on recommendations to address challenges, such as improving training around data capture and reporting, and strengthening onboarding processes to ensure all actors know the accountability system. Some district officials have already begun implementing select recommendations and have attracted national-level interest.

This experience shows that implementing a participatory approach to understanding local accountability systems demonstrates potential for galvanizing diverse groups of stakeholders to identify and develop local solutions to strengthening accountability systems.
Traditional Health Practitioners Policy development in South Africa: stakeholder mapping and analysis

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Background: Following the WHO’s recognition of the need to include Traditional Health Practitioners (THPs) in national health strategies and policies, a recent development in regulating THPs in South Africa has been promulgated by the THPs Act (22 of 2007). However, a decade later, the roles of THPs in the formal health sector remain both undefined and insufficiently formulated. Stakeholder mapping is critical in identifying the implications towards effective translation of regulations for sustainable practice supporting public health.

Objective: To conduct stakeholder mapping in order to determine whose interests should be taken into account when developing and/or implementing future policies or programs on traditional healthcare.

Methods: A desktop study was conducted to identify stakeholders likely to affect or be affected by the development and/or implementation of traditional health care policies or programs. Secondary information on the interests, challenges, potentials, interrelations, possible conflicts that may exist and the reasons for inclusion were detailed.

Results: Key stakeholders from five stakeholder groups, namely government, international organizations, academic experts, patient groups/non-government organizations and THP organization were identified. The literature revealed that there are more than 200 informal THP associations that are self-mobilized of which the Traditional Health Organization is the most predominant. Comparison of experience across stakeholders shows that there are some commonalities concerning general interests, power and resources, this is also influenced by strong cultural beliefs and values. There are stakeholder differences in the possibilities of transitioning THPs from an informal sector to a formal sector. Though the channels of communication and the accessibility to potentially influential individuals and groups is not clear, existing literature also highlights concerns of communication constraints and limited information on how the transition from an informal sector to a formal sector will be operationalized based on mutual respect.

Conclusion: Key stakeholders were identified and a meaningful foundation of stakeholders who may be taken into account on discussions around multidisciplinary issues of traditional healthcare were highlighted. This will promote better coordination and alignment of directly affected and indirectly affected stakeholders who influence the policy process.
Angeli Rawat, University of British Columbia
Poster Number: 71

Rural women’s preferences and knowledge on integrated, community-based self-collection for cervical cancer screening in rural Uganda: The ASPIRE Mayuge project

Co-authors: Angeli Rawat-University of British Columbia; Gina Ogilvie-University of British Columbia; Carolyn Nakisige-Uganda Cancer Institute, Makerere University

Background: The burden of cervical cancer disproportionately affects women in low- and middle-income countries who represent 85% of deaths globally from this preventable disease. Uganda has one of the highest incidence rates (47.5/100,000/year), resulting from limited screening access, weak health systems centralized in the capital, and subsequently 80% of women present with advanced disease stages. Self-collection for cervical cancer screening (SC-CCS) is an effective strategy in weak health systems settings. How best to integrate community-based SC-CCS within rural health systems is unknown. We aim to understand 1) women’s knowledge, preferences and potential barriers for SC-CCS, 2) health seeking behaviors, specifically barriers and facilitators to access and engagement in care and 3) health system challenges to implementation of community-based integrated CCS.

Methods: Surveys and focus group discussions (FGDs) were administered from 4 purposively selected villages in a rural district of Mayuge, Uganda. Community health workers conducted surveys and research assistants conducted FGDs with women’s groups in communities in Lusoga. FGDs were simultaneously translated to English by research assistants and audio recorded with permission, verbatim translated and transcribed. Survey data were analyzed using R statistical software. T-tests, Chi squared, and regression analyses were utilized to identify differences and trends across socio-demographic and explanatory variables. Data from FGDs were analyzed using thematic content analysis in Atlas TI. Data were triangulated across methods.

Results: A total of 83 participants were included (20: FGDs, 63 survey participants). Knowledge of determinants of cervical cancer transmission and treatment are limited across participants. CCS is not widely accessible despite women’s desire to be screened. We identified diverse perspectives on preferences of SC-CCS from door-to-door self-collection, community meeting self-collection and facility-based integration. Facilitators to accessing care and engagement include decentralized care, and community engagement and education. Barriers to accessing care and engagement included lack of transportation and knowledge, long wait times, and lack of service integration. Challenges to the implementation of SC-CCS include: lack of human resources trained in CCS, the need for specimen transport networks from communities to laboratories, and lack of infrastructure at clinics. Full analysis of results are forthcoming.

Discussion/Conclusions: Self-collected cervical cancer screening within communities could potentially prevent the high mortality related to cervical cancer while working within the human and financial resource limitations of rural health systems. By addressing women’s preferences and barriers to care programs have the opportunity provide build health systems that provide community-centered care close to women’s homes.
Janet Bettger, Duke University
Poster Number: 72

The 6 A’s Global Transitional Care Model to Coordinate Acute Hospital Care with Community and Social Services

Co-authors: Janet Prvu Bettger-Duke University; Duke GANDHI-Duke Global Alliance on Disability and Health Innovation

Background: Without notice, an acute illness or injury can result in life-altering disability. However, few systems of care are organized to support individuals in the transition home from the acute hospital. Fragmented transitions in care lead to preventable complications, disability and depression. Care transitions without adequate planning and follow-up after an acute illness or injury is increasing the global disease burden. Beyond urban areas in high income countries, the transition home from the hospital receives little attention globally. Our aim was to design a transitional care model appropriate for both developed and developing countries.

Methods: We conducted a mixed methods study guided by the socioecological model that has a theory-base for understanding interacting levels of influence (societal, community, institutions, social, family) on individual’s behaviors and outcomes. We synthesized peer-reviewed and grey literature to identify national and regional infrastructure, health care and community-based strategies, involvement of family, and meaningful patient outcomes examined in transitional care models with demonstrated effectiveness. Our policy analysis for nine countries (three low-, middle- and high-income) examined healthcare finance, availability and access to services, payment or policies for caregiver leave of absence, and products and technology that support independent living. Eighteen key informant interviews with healthcare and community leaders in six countries were conducted to assess the knowledge, attitudes and practices regarding hospital-to-home care transitions and opportunities for improvement.

Results: Key informants in each low-, middle- and high-income country acknowledged the challenges with fragmentation and opportunities to improve care coordination. Although fewer supportive policies were legislated in developing countries, several national strategic plans acknowledged key areas for development such as improving integrated health and social care or health information technology. These perspectives, policies and the evidence-to-date led to the development of the 6 A’s global transitional care model to address the care fragmentation between hospitals and the community. The essential components of the 6 A’s model are to assess, advise (and educate patients and families), arrange post-hospital services and supports, access organized follow-up, adopt self-management strategies and positive behaviors, and achieve the greatest quality of life (measured outcomes).

Conclusions: The 6 A’s model is largely dependent on care redesign or re-alignment of existing resources and skills training. Local policies and perspectives will need to be considered for each implementing environment. Implementation research using a community-based participatory approach with attention to the six health system building blocks is recommended for the 6 A’s global transitional care model.
**Breast Cancer Screening programme in China: Does one size fit all?**

Co-authors: Li Sun - Peking University School of Public Health/London School of Hygiene and Tropical Medicine; Rosa Legood - London School of Hygiene and Tropical Medicine; Zia Sadique - London School of Hygiene and Tropical Medicine; Isabel dos-Santos-Silva - London School of Hygiene and Tropical Medicine; Li Yang - Peking University School of Public Health

**Background:** In China, breast cancer is the most frequently diagnosed female cancer. Marked urban-rural disparities have been reported in breast cancer incidence and survival. In 2009, China launched a breast cancer screening programme for rural women at average risk aged 35-64 years using ultrasound combined with clinical breast examination as the primary screening tool. In 2012, breast cancer screening was carried out using ultrasound and/or mammography among high-risk urban women aged 40-69 years that were identified through risk assessment questionnaires. To date the economic evidence is still lacking. This study aimed to analyse the cost-effectiveness of breast cancer screening compared to no screening among Chinese rural and urban women.

**Methods:**

Study design: We developed a Markov model to estimate the lifetime costs and effects from a societal perspective for the general population-based cohorts both in urban China with high incidence and rural China with low incidence.

Participants: Analyses were conducted for rural women aged 35 years and urban women aged 40 years.

Interventions: Asymptomatic women in the intervention arm were screened every three years. Breast cancer in the non-screening arm can only be diagnosed on presentation of symptoms.

Analysis: The main outcome measure was cost per quality-adjusted life year (QALYs) gained with a 3% annual discount rate. Parameter uncertainty was explored using one-way and probabilistic sensitivity analyses.

Findings: Compared to no screening, the rural breast cancer screening programme costs $186.72 more and leads to a loss of 0.20 QALYs due to disutility from false positives. Breast cancer screening among Chinese rural women is more expensive and does harm to health with an incremental cost-effectiveness ratio (ICER) of $916/QALY. In urban areas, the breast cancer screening programme costs $84.99 and gains 0.01 QALYs with an ICER of $6,671/QALY, well below the willingness-to-pay threshold of $23,050/QALY at three times GDP per capita (2014) in China. The results are shown to be robust through the sensitivity analyses.

Interpretation: In a rural setting with such low breast cancer incidence, screening for asymptomatic disease among the general population is not cost-effective with current screening tools. Instead, priority should be given to ensure that symptomatic women have proper access to diagnosis and treatment at an early stage. But in urban China, a high-risk population-based screening method for breast cancer is very likely to be cost-effective compared to no screening.
Cost-effectiveness of a community-based intervention to improve growth among children under two in rural India (CARING trial)

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Objectives: To assess the cost-effectiveness of a community-based intervention to improve growth among children under two years of age in two rural districts of eastern India (The CARING trial), compared with existing services.

Methods: CARING was a cluster-randomised trial with a nested cost-effectiveness analysis. The trial aimed to assess the effect of a community-based intervention with a new, government-proposed community worker engaged in improving feeding, infection control, and care-giving practices for children under two through monthly home visits to mothers of all children under two, and monthly women’s groups meetings using participatory learning and action to catalyse action for maternal and child health and nutrition. The cost-effectiveness analysis was conducted from a provider perspective, measuring the costs of programme and healthcare providers. Incremental cost-effectiveness ratios (ICERs) were calculated for the intervention compared with existing services. All costs were adjusted for inflation, discounted at 3% per year and converted to 2016 international dollars (INT$). Sensitivity analyses were conducted to assess the robustness of results.

Results: The total and average annual costs of the intervention were INT$ 1,413,190 and INT$ 423,957, respectively. The average annual costs of the intervention per live birth and per pregnant woman covered were INT$ 290 and INT$ 151, respectively. The average annual cost of the intervention was INT$ 7 per person covered. The incremental cost-effectiveness ratios were INT$ 29,561 per infant death averted, INT$ 7,804 per case of underweight prevented and INT$ 959 per life year saved.

Discussion: The results indicate that having a worker dedicated to the health and nutrition of pregnant women and children under two is highly cost-effective strategy to reduce infant deaths and can be considered for scale-up in India.
Cost-utility of screening for depression amongst asylum seekers: a modelling study in Germany

Co-authors: Louise Biddle-University Hospital Heidelberg; Kayvan Bozorgmehr-University Hospital Heidelberg

Background: Asylum seekers have a high burden of mental illness owing to their experience of traumatic events before, during and after flight. Mental health screening has been suggested to identify asylum seekers with psychosocial needs and provide adequate support. However, little is known about costs of screening in asylum seekers relative to expected health gains. We assessed whether and under which conditions screening asylum seekers for depression could be cost-effective, and the value of future research in this area.

Methods: This study used an explorative modelling methodology to assess the cost-effectiveness of a potential screening intervention during initial medical examinations in German asylum reception centres, as compared to regular case-finding through non-profit psychosocial centres. We modelled this using a decision tree over a timeframe of 15 months (three months of treatment and 12 months of follow-up), at which the cost per quality-adjusted life-year gained was compared for both scenarios. Data points were taken from the published literature. Deterministic and probabilistic sensitivity analyses were used to address uncertainty around parameter estimates, and value of information analyses were performed to indicate the value of future research.

Results: The model demonstrates a high probability (p=0.78) of the screening intervention being cost-effective at the €50,000/QALY threshold. Deterministic sensitivity analyses showed that cost-utility substantially depends on the process of care following the screening test: when acceptability and attendance parameters were decreased by 40%, the resulting ICER increased by 55-132%. Eliminating the uncertainty of screening process parameters was associated with a value of €1.6 billion.

Conclusions: Research into the cost-effectiveness of screening asylum seekers for depression needs to consider not just the screening process itself, but also the acceptability and accessibility of the process of care following screening. These aspects are crucial components of the screening intervention. There is considerable value in conducting further experimental research to gain better process parameters of depression screening in this population.
The cost of implementing universal health coverage in fragile states: study results from Afghanistan and Syria

Co-authors: David Harold Collins-Management Sciences for Health; Saeed Khwaja-Ministry of Public Health, Afghanistan; Daniel Albrecht-World Health Organization; Tasnim Atatrah-World Health Organization

Achieving universal health coverage requires the implementation of essential health service packages to ensure that the population has access to a standard set of the highest priority health services. However, these packages have not always been fully implemented in many countries, partly because the packages were never adequately costed so it was not clear how many resources (e.g., staff, medicines) and how much funding would be required to implement them. The purpose of this presentation is to show the methods used for conducting this type of costing as well as the challenges encountered and their solutions and the results of the costing in two countries.

In Afghanistan and Syria, essential service packages have been developed and are being costed – in the former to determine contracted provider payment rates and in the latter to help advocate for adequate funding. In Afghanistan, a total of 60 services were defined as the full package at the comprehensive health centre level. Based on a sampled facility with a catchment population of 31,468 people, a total of 458,912 services would be required to meet all the health needs (according to incidence and prevalence rates) and this would require US$887,000 (US$28.20 per capita). The package for a similar facility in northern Syria comprises 69 services. Based on a sampled facility with a catchment population of 65,000 people, a total of 208,864 services would be required to meet all the health needs and this would require US$2.0 million (US$31.23 per capita). Implementing the full packages of services would require a six-fold increase of current expenditures in northern Syria and a three-fold increase in Afghanistan.

This presentation will provide details of the cost of each service, the total cost by program and the cost of each type of resource (e.g., staffing, medicines) as well as the numbers of staff and quantities of medicines and tests required. The presentation will also describe the innovative methods used to cost the packages, the challenges encountered and the solutions found, as well as examples of costs from two countries. This will be useful for other countries that need to cost their health service packages to help achieve universal health coverage.

The audience for this presentation includes health economists, planners, policy-makers and managers who need to understand the cost of essential health service packages and the methods and challenges of calculating such costs.
Catharine Taylor, Management Sciences for Health  
Poster Number: 77

**A cost-effectiveness and cost savings analysis of community-based seasonal malaria chemoprevention in seven countries in the Sahel region of Africa**

Co-authors: Catharine Taylor; Colin Michael Gilmartin-Management Sciences for Health; David Collins-Boston University and Management Sciences for Health; Justice Nonvignon-University of Ghana; Fadima Yaya Boucoum-Institut de Recherche en Sciences de la Santé (Burkina Faso)

**Background:** In areas of seasonal malaria transmission, the WHO recommends the use of Seasonal Malaria Chemoprevention (SMC), a preventive therapy for children. SMC is distributed by trained community and facility distributors in a campaign-style approach on a monthly basis for four months during the peak malaria season. In areas of the Sahel region in Africa, SMC could reduce the incidence of Plasmodium falciparum malaria among children by 80% and avert thousands of childhood deaths. Despite the feasibility and safety of SMC, there is a need for additional information on its costs, cost-effectiveness, and cost savings to the health system to improve resource allocation.

**Methods:** The study was undertaken in 2016 in seven countries: Burkina Faso, Chad, Guinea, Mali, Niger, Nigeria, and The Gambia. The study collected data on the financial and economic costs of SMC which was supported by the UNITAID ACCESS-SMC Project. An ingredients approach was used to identify, measure, and value all financial resources. Using Imperial College London’s mathematical model of malaria transmission, impact was estimated for the number of under-five malaria cases averted, deaths averted, and disability-adjusted life years (DALYs) averted. Cost savings were estimated using malaria diagnosis and treatment costs based on White et al. (2011).

**Results:** In the seven countries, 47,238 trained distributors administered 24.9 million monthly SMC cycles. The total recurrent economic cost of ACCESS-SMC ranged from $609,889 in The Gambia to $6,321,460 in Nigeria. SMC was cost-effective in terms of malaria cases, deaths, and DALYs averted in the five countries where it could be measured. The cost per uncomplicated malaria case averted ranged from $2.47 to $16.48. The cost per severe malaria case averted ranged from $104.41 to US $402.07. The cost per death averted ranged from $465.67 to $1,793.24. The cost per DALY averted ranged from $16.25 to $62.57. The total financial savings were $43.2 million and the total economic savings were $100.1 million in the five countries where cost savings could be estimated. The net financial cost savings were $26.9 million and the net economic cost savings were $82.3 million.

**Conclusions:** SMC is a cost-effective intervention for preventing malaria among children and reducing the financial burden of malaria. In many countries, the cost of SMC program implementation does not represent an added cost, but rather an investment that yields cost savings to the health system and society.
“What will we do?”- Household expenditure post stroke in India, a case study from ATTEND trial

Co-authors: Huei Ming Liu-The George Institute for Global Health; Dorcas Gandhi-Department of Neurology and College of Physiotherapy, CMC Ludhiana, India; Richard Lindley-The George Institute for Global Health; Jeyaraj Pandian-Department of Neurology, CMC Ludhiana, India; Stephen Jan-The George Institute for Global Health

Background:
India is in a phase of epidemiological transition, with a rise in the burden of non-communicable diseases such as stroke. The randomised controlled trial (ATTEND trial) evaluated training a family carer to enable maximal rehabilitation of patients with stroke-related disability was conducted across 14 hospitals in India. These included government/academic, Christian Missionary hospitals and private hospitals with differing financing structures. Assessing the out-of-pocket expenditure of trial patients and its impact will be informative for practice and policy.

Methods:
A within-trial cost analysis, using socio-demographics of the patient cohort (N=1250) and individual healthcare utilisation data from all patients. Data items included loans taken, assets mortgaged, declaration of bankruptcy for medical expenditure and charges incurred for outpatient medications and rehabilitation. This was triangulated with findings about household economic burden from an embedded qualitative study as part of the trial’s process evaluation with 22 patients and 22 carers.

Results:
At 3 months, 18.7% of surviving patients reported taking a loan, 9.2% mortgaged their assets and 7.8% declared bankruptcy for medical expenditure. Financial stress was reiterated by many of the interviewed participants as greatly impacting on patients’ and carers’ mental health. The impact of stroke described by patients and carers ranged from financial catastrophe requiring pledging of land and jewels especially if the patient has been the main income earner on a daily wage; to recovery and return to work for those who are able to access rehabilitation. The “below the poverty line” government insurance for in-patient costs available at some hospitals helped substantially. Other forms of financial protection included work pension and informal family support. The cost of hospital treatment and outpatient rehabilitation were described as a significant burden for daily-wage earners. At a rural hospital it was estimated that 40% of patients took leave against medical advice partly due to the costs of hospitalisation. Charges incurred for outpatient medications and rehabilitation comprised of a wide spectrum across the types of hospitals.

Conclusions:
This study highlights that families who are relying on a daily wage, who are not covered by the “below the poverty line” insurance for inpatient costs, are likely to have financial catastrophe post stroke, particularly if the main income earner is the patient. There is an urgent need to identify funding models and build health systems to provide affordable in-patient care and low-cost rehabilitation to reduce out-of-pocket household expenditure for such families.
Josefien Van Olmen, Institute of Tropical Medicine  
Poster Number: 79

SMART2D - A people-centred approach through Self-Management and Reciprocal learning for the prevention and management of Type-2-Diabetes in a low-, middle- and high-income country

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Background

Healthcare services are struggling with an increasing burden of Type-2 diabetes (T2D) but are often poorly accessible, acceptable, available, affordable or adequate to the needs of target populations in low- and middle-income countries and disadvantaged areas in high-income countries, resulting in poor prevention and management of T2D. The SMART2D project aims to improve capacity for T2D prevention and management using proven strategies like task-shifting to non-physician health care providers and community health workers, and expanding care networks through community-based peer support groups.

Method

The target population includes adult men and women at high risk of, or diagnosed with, T2D in a rural setting in a low-income country (Uganda), a peri-urban township in a middle-income country (South Africa) and socioeconomically disadvantaged suburbs in a high-income country (Sweden). A cluster randomized adaptive implementation trial design is used to test the effectiveness of a contextually adapted self-management approach using health facility and community strategies for the prevention and control of T2D in the three study settings; to evaluate the outcome of the self-management approach and the added benefit of the community strategy compared to the facility strategy in dialogue with stakeholders; and to explore and evaluate implementation processes at each step. The study has a strong social innovations component, leveraging existing networks and platforms to enable cross-lessons from other chronic conditions and across sites using a strategy of reciprocal learning.

Results

An in-depth formative phase has been conducted in each study setting amongst patients at risk of, or diagnosed with diabetes, and their families; health care professionals; and community members and networks. In-depth interviews, focus group discussions and stakeholder workshops have been conducted. A phased, consultative participatory approach was used to discuss formative research findings and develop a complex contextualized intervention framework for each setting, including interlinked facility and community strategies to address prevention (for people at risk) and care and management of T2D. After an iterative phase of modifications and improvements of the intervention framework, the trial started in Jan 2017 with at least two arms, a facility-only versus a combined facility and community arm. In addition, environmental challenges, in particular related to the food environment, are dealt with in more detail in South Africa and Sweden.
Integrating health services at primary health care level: gestational diabetes care and type 2 diabetes prevention through PMTCT services in South Africa.

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Background: Some pregnant women under PMTCT, a programme that has been successfully integrated and influenced other maternal and child health services at primary health care (PHC) in South Africa, are also diagnosed with gestational diabetes (GDM). GDM is glucose intolerance recognised for the first time during pregnancy. It increases risk for type 2 diabetes (T2D) for women and their babies. GDM is managed at tertiary level in South Africa but how GDM is managed among HIV infected women has not been studied. Integrating PMTCT with GDM screening and intervention in routine antenatal care (ANC) and postnatal care (PNC) could potentially reduce T2D. This study explored how the PMTCT integration experience in South Africa could bridge gaps in managing GDM and T2D for women and their exposed babies. It also assessed the possibility of integrating GDM and T2D prevention into the PMTCT cascade at PHC level.

Methods: Time-series analysis of 2012-2017 PMTCT data for Western Cape province, South Africa, was complemented by analysis of policy documents on PMTCT and PNC and qualitative interviews with 10 national and local key informants, 9 clinic managers, nurses and midwives in disadvantaged facilities and 10 HIV-infected women diagnosed with GDM in Cape Town. All semi-structured interviews (N=29) were in person, audio-recorded and transcribed. Atlas.ti software was used to assist thematic analysis.

Results: Policy documents emphasised comprehensive ANC including HIV counselling and testing (HCT) and treatment initiation. However, GDM and other important screenings for non-communicable diseases (NCDs) were not adequately included in ANC policy while only HIV services remained a key part of PNC policy. All participants underlined the importance of integrated PMTCT, through which women who tested positive reached 84064 (235% increase) between 2014-2017, while those who delivered under PMTCT increased by 16% and MTCT reduced by 16% between 2012-2017 in Western Cape. GDM screening and subsequent interventions to prevent or delay T2D were not included in PMTCT. All women interviewed wanted their GDM screening and management through PMTCT services. Most key informants (8/10) and clinic staff (6/9) said that GDM and T2D integration could be feasible upon more staff recruitment, adequate training and managerial support and infrastructure expansion.

Conclusions: Integration, HIV and NCDs are department of health priorities. Integrating GDM care and T2D prevention into PMTCT services at PHC level is possible and can improve experienced quality of care and reduce tertiary care burden.
Hypertension and diabetes management in a struggling health system: Patients’ perspective of challenges and coping mechanisms in two districts in Uganda – A qualitative study

Background

The burden of non-communicable diseases (NCDs) in Uganda is steadily rising amidst the high prevalence of communicable diseases. Moreover, the health system is grappling with many challenges including under funding, inadequate human resources and frequent stock outs of essential diagnostics and supplies. This study explored patients’ perspectives of the healthcare challenges and their coping mechanisms with hypertension and/or diabetes in Mukono and Buikwe districts in Uganda.

Methods

This qualitative study involved 4 focus group discussions with patients at four selected health facilities in Mukono and Buikwe districts of Uganda. All interviews were audio recorded, transcribed and resultant data thematically analysed.

Results

Patients’ perspectives of the health system challenges related to hypertension and diabetes management were: a persistent lack of medicines at health facilities, long waiting times and queues, poor staff attitudes and absence from station, high costs of medicines, and few opportunities for self-monitoring. The other challenges were inadequate knowledge about their conditions and unrealistic lifestyle recommendations by health workers for example regarding physical activity and diet. Patients’ measures to counter the impediments and cope with their conditions included formation of associations and financial contributions to support purchase of essential diagnostics such as diabetes testing kits, communal blood pressure machines and drugs during stock out periods at health facilities. To counter the high costs of medicines, some patients reportedly relied on cheaper options such as traditional medicine – using it alone or concurrently with conventional medicine. Another key support mechanism for patients were social networks where some looked up to relatives working at health facilities to avail them essential drugs whereas others shared their drugs with peers as they looked for funds to buy their own. Peers and family members also acted as reminders to take medication. Other respondents reportedly adopted changes in their lifestyle as a means to manage their conditions including having strict dietary regimens and engaging in physical exercises. Whenever some respondents lacked transport to go to the health facility on clinic days, they reportedly trekked the whole distance to be able to keep their appointments.

Conclusions

Several challenges impede access to appropriate health care for hypertension and diabetic patients. As a response, patients rely on several strategies to cope with their conditions which are notably inadequate and unsustainable. Concrete measure should therefore be instituted to build the health system capacity to manage the growing burden of NCDs so that such patients are not left behind.
Carolina Santamaría-Ulloa, Instituto de Investigaciones en Salud, Universidad de Costa Rica
Poster Number: 82

**Diabetes epidemic: Inequalities increase the burden on the healthcare system**

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Latin American and the Caribbean countries are undergoing very high growth rates of the elderly population. These populations are experiencing an increase in the prevalence of obesity-related conditions such as diabetes. Diabetes is a major cause of morbidity and mortality and represents a source of demands on already constrained healthcare systems. In this research, we estimate inequalities in diabetes incidence, prevalence and mortality. We also assess its impact on the economic burden to the healthcare system in Costa Rica.

CRELES (Costa Rican Longevity and Healthy Aging Study), a three-wave longitudinal study, is the main source of data for this research. It is a nationally representative sample of the elderly in Costa Rica, with an oversampling of the oldest adults. Sample size was 2,827. Data analyses and estimations were conducted with STATA. Analyses include descriptive statistics, multiple regression models, and survival analysis models depending on the nature of the described phenomena.

More than a fifth of Costa Rican elderly experience diabetes. Incidence is estimated at 5 per 1,000 person-years in population 30+. Gender and geographical inequalities among the diabetic elderly were found. Gender inequalities are present in incidence, prevalence and mortality. Men have significantly lower prevalence (16.51% vs. 24.02%, p<0.05) and incidence (4.3 vs. 6.0 per 1000 person-years, p<0.05), but higher mortality rates (HR=1.31, p<0.01). Geographical inequalities translate into a lower probability of having the condition diagnosed. As time to the closest facility increases, the odds of having been diagnosed decreases (OR=0.77, p<0.05).

Diabetic as compared to the non-diabetic population impose a larger economic burden on the healthcare system in terms of outpatient care (OR=3.08, p<0.01), medications (OR=3.44, p<0.01) and hospitalizations (OR=1.24, p<0.05). It is estimated that the diabetic elderly population will double between 2010 and 2025, implying a massive increase in healthcare costs. Once controlling for diabetes and other comorbidities, individuals living in the Metro Area have a significantly lower probability of being hospitalized (OR=0.72, p<0.05). Women have higher utilization rates of both outpatient care (OR= 2.02, p<0.01) and medications (OR= 1.73, p<0.01) along with lower odds of hospitalization (OR= 0.61, p<0.01).

The economic burden imposed by this epidemic challenges the healthcare system, which must take into consideration these gender and geographical inequalities. Health promotion and disease prevention policies focused on vulnerable groups need to be encouraged. Strategies should booster preventive healthcare utilization by men and aim at making healthcare services accessible to all no matter their geographical location.
Neeru Gupta, University of New Brunswick
Poster Number: 83

Do physician practice incentives in primary care improve diabetes health outcomes? Evidence from linked administrative data in a context of universal health coverage

Co-authors: Neeru Gupta-University of New Brunswick; Rene Lavallee-New Brunswick Department of Health; James Ayles-New Brunswick Department of Health

Background: In New Brunswick (Canada), 13.6% of the adult population 35 and older is living with diabetes mellitus. Yet, the organization and financing of the health system largely remains a reflection of historical epidemiological trends weighted towards acute care needs. The lack of financial barriers to primary care in this context of universal coverage is not sufficient to prevent inequalities in diabetes-related health consequences. In line with the aims of the provincial government strategy to address the growing public health and clinical challenges of chronic noncommunicable diseases, financial incentives for primary care physicians were introduced in 2010 for comprehensive diabetes management. This research assesses the impacts of pay-for-performance (P4P) on effective coverage of diabetes care for prevention of severe morbid events and potentially avoidable hospitalizations. We leverage government-academic collaborations to generate policy-actionable research evidence.

Methods: We use a rigorous quasi-experimental study design drawing on linked population-based longitudinal administrative data sets of physician service billings, hospital discharge abstracts, and provider and resident registrations. Diabetes cases are identified through a validated algorithm tracing individuals’ interactions with the healthcare system. We apply difference-in-differences econometrics to estimate the effects of P4P on excess healthcare costs for cohorts of residents with diabetes, by patient exposure to physician uptake of the practice incentive, using propensity score matching to adjust for patient and physician characteristics across the comparison groups.

Findings: Coverage of incentive-based comprehensive diabetes management remains less than half (44%) of adults with diagnosed diabetes, suggesting important gaps in preventive care. Incentive payments were found to lead to significant positive increases in compensation for physicians attributable to the introduction of P4P (adjusted coefficient=0.158; 95%CI:0.146-0.170). Some evidence was found of P4P reducing potentially avoidable hospitalization costs among newly diagnosed patients, but little cost avoidance was observed elsewhere in the healthcare system.

Conclusions: Effects of New Brunswick’s P4P for diabetes care are to date mixed. These results reflect the fragmented and deficient evidence base found in many review studies of P4P effects on patient- and policymaker-important health outcomes. High risk of multiple morbidities among diabetics, sizable turnover of patients with poorly controlled diabetes, and heterogeneity of physician responses to performance incentives may be hindering the effectiveness of care guidelines to improve population health and sustainability of health system investments. Our findings suggest that decision-makers should tread cautiously in developing P4P programs to incentivise care for noncommunicable diseases while implementing and sustaining universal health coverage.

Background: Diabetic Retinopathy (DR), the fifth leading cause of blindness, has affected approximately 1.8 billion people globally resulting into 4.8% of blindness. Existing data suggests that early detection of DR could prevent up to 95% of all blindness. Although 75% of global burden of DR is shared by developing countries, implementing routine DR screening is challenging mostly due to limited numbers of eye clinics and ophthalmologists. In Bangladesh 5.7 million people are diabetic and the number is projected to be doubled by 2030. Engaging non-ophthalmologist health professionals in DR screening could be an effective task-shifting strategy to prevent blindness from diabetic retinopathies.

Methods: This quantitative operation research was conducted in one district hospital (DH) and one medical college hospital (MCH) in Bangladesh. Diabetic patients attended in the study hospitals during June 2017 to January 2018, satisfying set inclusion criteria were included as study participants. Paramedics and nurses grouped as provider 1 and ophthalmologist as provider 2, have received training on DR diagnosis using colour fundus photography. The retinal images taken by the provider 1 were diagnosed independently by both the provider one and two following a double-blind approach. The diagnostic accuracy between provider 1 and 2 were evaluated in terms of sensitivity, specificity, and positive and negative predictive values. Their overall agreement and disagreement were tested by the kappa statistic.

Results: A total of 642 diabetic patients were screened where the DR positive rate was 46.25% in MCH (n=400) and 22.08% in DH (n=240). The diagnostic accuracy of DR detection for provider 1 in relation to provider 2 in MCH were as follows: sensitivity 84%, specificity 87%, positive predictive value 46% and negative predictive value 54%. While in DH, the overall sensitivity was 84%, specificity 97%, positive and negative predictive values were 22% and 77% respectively. The kappa statistic was 0.70 in MCH and 0.83 in DH that indicates overall agreement between two types of providers was good (70-80%). The Sensitivity and specificity of detecting different stages of DR were as follows; mild DR (57%, 86%), moderate DR (47%, 96%), severe non proliferative DR (50%, 90%) and proliferative DR (27%, 99%).

Conclusion: Colour fundus photography reported as an effective DR screening tool and this task can be successfully shifted to non-ophthalmologist health professionals to improve DR screening service coverage. However, advanced stages of DR diagnosis should be done by ophthalmologist as true positive DR detection rate was low among non-ophthalmologist
Poster Abstracts

Treatment of Clubfoot Deformity in Nigeria: A Model of Physician-driven Health System Strengthening

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Clubfoot deformity (talipes equino varus) is the most common musculoskeletal birth defect in the world, affecting approximately 200,000 newborns every year, 80% of whom are born in middle- and low-income countries. Prior to 2007, the primary treatment for clubfoot deformity in Nigeria was surgical correction, which is costly, higher risk, and has been shown to have serious long-term detrimental effects later in life. Surgical treatment has been available to only a small percentage of families who could afford it and/or who can travel to a major medical center. The Ponseti method for correcting clubfoot consists of a series of gentle manipulations followed by the application of plaster casts, typically applied over a period of 4-to-6 weeks. Patients then wear a simple brace (comfortable shoes connected to a separator bar) while sleeping, until age 4. The Ponseti method is highly successful (95%), low-cost, non-surgical, and is done on an outpatient basis. This method was introduced in Nigeria in 2007. It has since been promoted by a core group of physician-advocates who have joined together to establish the Nigerian Clubfoot Child Care Program. There are now 79 centers in Nigeria with the capacity to treat more than 50% of the 8,000 children born with clubfoot every year. The Program organizes parent support groups, promotes public awareness, and monitors treatment outcomes using an electronic database system. This physician-driven program has successfully advocated for the acceptance of National Clubfoot Treatment Guidelines and has obtained support from insurance providers and the Health Ministry. The goal is to treat every child with clubfoot by the end of the year 2020. In addition to better patient outcomes using the Ponseti method, the Nigerian Clubfoot Child Care Program has helped to strengthen the country’s health system by freeing up resources previously dedicated for surgical treatment. There have been important additional benefits. The physicians who have been involved in this program have gained valuable experience advocating with health administrators, government agencies, the media, and parent groups. They now have a broader understanding of the supporting public health elements that are necessary to successfully introduce a clinical innovation. The group has also gained confidence that they can address similar problems on a national scale, such as hip dysplasia, scoliosis, and others. Introduction of the Ponseti method for treating clubfoot is having similar positive effects on health systems in a number of countries, including Pakistan, Mexico, China, and others.
Inclusive health Systems: Incorporating individuals with disability into plans for achieving the Sustainable Development Goals

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Purpose Globally, an estimated one billion people live with some form of disability, caused by communicable diseases, non-communicable diseases and injuries. Nearly 90% of people with disability are in low- and middle-income countries (LMICs), where weak health systems, poor infrastructure, lack of equipment, lack of trained personnel and limited financial resources further compound the problem. This has negative health and social consequences not only on the differently-abled individual, but on the family and the society as well.

Focus/content The focus of this work will be to understand facilitators and challenges faced by individuals with disability in accessing healthcare, education and work in the context of a low-and-middle income country (LMICs). The outcome will be to develop an “accessibility tool” to collect data on environment of individuals with disability using a standardized, population-based approach. Significance The majority of LMICs are experiencing an increasing prevalence of individuals living with disability. The burden of disability is increasing in part due to availability of better treatment and increasing life expectancy. This has implications for individuals with disability who need support from families and society for their inclusion in different sectors including health, education and employment so that they can sustain themselves. The Sustainable Development Goals (SDGs) goal 17 emphasizes the importance of disability data to monitor disability related SDGs. In addition, the SGD include four goals on inclusion of individuals with disability; Goal 4 focuses on education, Goal 8 on employment, Goal 10 on social, economic and political inclusion, and Goal 11 on accessible cities, transport services and public spaces. Our work will build on our previous efforts in Uganda and other LMICs, where we have tested population based disability assessment approaches and have identified the need for assessing accessibility for individuals with disability. Our participatory approach will include engagement with multiple stakeholders, Ministry of Health, Ministry of Education, Ministry of Works and Transport, non-governmental organizations like COMBRA, district health office, individuals with disabilities/caregivers, national and international disability experts, and healthcare providers. Target audience This work will be of interest to individuals and organizations that focus on using evidence based approaches to influence development and implementation of policies and practices for inclusion of individuals with disabilities by making their home, work and school environment accessible and by providing them with opportunities to be fully participating members of the society—socially and economically.
Households matter: a Photovoice study about the household’s influence on social inclusion of children with special needs in Uganda

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Background

In line with the current view on disability – as an interaction between the child’s health and social environmental factors – the focus of research shifted towards seeing social inclusion as a complex interaction between personal and environmental factors. Although children's interpersonal environment is centered at the household level, little is known about the role of the household in studies focusing on social inclusion. Therefore, aim of our research is to investigate the way in which the household affects social inclusion.

Methods

As research is required which is undertaken in collaboration with children with special needs and their parents, Photovoice will be used to answer our research questions. 12 parents of a child with special needs were selected from the parent’s support group of a local NGO in Wakiso district, Uganda. In this Photovoice study, parents themselves produce visual representations about aspects of their children’s life with regard to social inclusion and the household’s influence on this. These images are the visual stimuli in a subsequent in-depth qualitative interview with the respondent who produced that particular visual material. Transcripts of these interviews and observatory notes are imported into NVivo for thematic analysis.

Results

Results indicate that household’s ecological condition influence the way in which children with special needs are included in society. More specifically, household functioning, socio-economic status, and social capital have been found to be important factors in stimulating their child’s social inclusion. Positive household conditions can prevent children from experiencing the negative societal views on special needs in the Ugandan society and can stimulate their social inclusion. However, negative household’s ecological conditions can form a detrimental influence on a child’s integration in society.

Discussion

This research has the potential to plug a gap in the understanding of social inclusion of children with a disability and its barriers in resource limited settings. For policy purposes, this project aims to support awareness building efforts and the development of strategies to improve social inclusion – by strengthening the household culture, socio-economic status and social capital. Despite the fact that disability among Ugandan children is prevalent, it is a “hidden reality”. This research helps to make a new step to lay a foundation for the establishment of sound policies to “leave no one behind”, by revealing this “hidden reality” and drawing attention to the life situation of children with disabilities.
Factors affecting the quality of life in patients with end-stage renal disease in selected hospitals in KwaZulu-Natal, South Africa

Co-authors: PRETTY NTOMBI MBEJE-University of KwaZulu-Natal

Background: End-stage renal disease (ESRD) is a global health problem with increasing prevalence worldwide. It is estimated that the number of patients with ESRD will increase to almost 60% by 2020 and this has a great impact on the quality of life in patients affected.

Study Aim: This study is aiming to determine the socio-economic factors that affect the quality of life in patients with ESRD.

Methodology: The researcher applied a mixed method approach using an explanatory partially mixed sequential dominant status design. Non-probabilistic purposive sampling was applied at the Renal Units of four selected Hospitals at ETekwin and UMgungundlovu Districts in KwaZulu-Natal. Data was collected from the patients diagnosed with ESRD and coming from all over the province of KwaZulu-Natal. The first phase of data collection is completed where a structured questionnaire (HRQOL –SF36) was used. A total of 316 (n) participants of the study fully completed the questionnaire. The second phase of data collection using focus groups is to be commenced as soon as the analysis of phase 1 is completed. Sequential mixed data analysis is adopted so as to obtain rich data to generate findings.

Findings: The study revealed that 49.7% participants lost their jobs as a result of ESRD and as they have to go for haemodialysis schedule 3 times a week (56.4% ) which clearly resulted to 98.7% strongly agreeing that dialysis has an impact to their personal and/or family economy. It is also revealed that patients on haemodialysis are mostly experiencing financial constraint as compared to those on peritoneal dialysis. 17% of the total study population agreed that at times they feel like missing haemodialysis as a result of financial constraint and they are fully aware of the adverse effects of missing haemodialysis. About 41.8% patients felt that they are burden in their families and they seek their assistance at all times as they are frequently hospitalised. Deprivation from engaging in social activities was agreed by 86.1% and 28.8% feel rejected by people that were close to them prior dialysis yet support plays an important role in adaptation to this debilitating illness.

Conclusion: This study highlights the relationship between the socio-economic conditions of low-income families in patients with ESRD and their QOL. It is therefore recommended that modern therapy should embrace the concept of QOL and focus more on optimization of self-management to improve the well-being of the patients with ESRD.
Alleviating the access abyss in palliative care and pain relief – an imperative of universal health coverage: findings and recommendations of the Lancet Commission report

Background: There is a massive burden of serious health-related suffering (SHS), a majority of which can be alleviated with palliative care and pain relief. However, access to palliative care is severely limited in much of the world, even to oral morphine for pain relief. The Lancet Commission on Global Access to Palliative Care and Pain Relief sought to respond to the equity and health imperative of closing the global divide in access to palliative care, one of the most neglected areas in global health and a critical component of universal health coverage, as established by the 2014 World Health Assembly resolution. The Commission developed a framework to measure the global burden of SHS and produced the evidence-base to address this burden.

Methods: Global Health Estimates (GHE) were used to make calculations on the burden of SHS. Data on distribution of morphine-equivalent opioids from the International Narcotics Control Board (INCB) was analyzed to determine the gap in access to pain relief. Reference country-reported prices for different country income group levels, and for medicines, also the lowest and highest international buyer prices, were used to cost an essential package of palliative care services.

Results: Of the 56.2 million people worldwide who died in 2015, approximately 25.5 million experienced SHS. Among them were 2.5 million children. In addition, another 35.5 million people experienced SHS due to life-threatening and life-limiting conditions. There are more than 61 million individuals who experience SHS annually and 80% of them live in low-income and middle-income countries (LMICs). An essential package including inexpensive, off-patent, injectable and oral immediate-release morphine would cost approximately US$3 per capita in LMICs, or around 1% of LMIC per capita health expenditure. Further, the unmet medical need for opioid analgesics for children experiencing SHS in low-income countries can be addressed with just above $1 million. Moreover, the global gap in the need for morphine in palliative care can be closed with approximately $145 million.

Discussion/Conclusions: There are effective systemic solutions which can be implemented at the global and national levels to avert preventable pain of millions of people and reduce the burden of avoidable human suffering. This includes of vulnerable groups such as children and individuals impacted by conflict and humanitarian crises.
Addressing context in implementation research for health systems strengthening: lessons from Global Alliance for Chronic Diseases Projects

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Background: Understanding context is the key to successful implementation. However, the context in which interventions are implemented is complex, which arguably means the same intervention will not work in the same way in different contexts. It is therefore critical to study how context can be systematically addressed, incorporated or evaluated. We describe how context was addressed (explored or evaluated) in multiple implementation research projects within the Global Alliance for Chronic Diseases network, an alliance of 14 funding bodies focused on improving health in people with chronic disease across all regions of the globe.

Methods: This was a cross-sectional study with a semi-structured survey collecting quantitative and qualitative data across 20 implementation research projects addressing hypertension, diabetes and lung diseases. Data were collected from February to July 2017. Teams were asked to identify levels of context addressed in the project using a multi-layered context framework including five different levels (individual and family, community, healthcare setting, local or district level, and state or national level), with each level being broken down further into sublevels. Thematic analysis was used to identify how context was addressed and how contextual lessons were incorporated into intervention content/strategies and the implementation process.

Findings: On average, four levels were addressed in each project. Almost all of the projects (n=19) addressed the first level of context (individual and family) and levels 2-4 (n=17) while 12 projects addressed components at the state or national level. A mixed method approach was common. Four main themes (representing methodological approaches) were identified to address context: formal and informal assessments, engagement of stakeholders, local adaptations/development based on local needs, and diverse set of data sources. Three main themes were identified to summarise the approaches used to incorporate lessons from when teams addressed context in the intervention: inform or adapt content of the intervention, improve participation and engagement with the intervention, and improve communication with participants and stakeholders. Four main themes were identified to summarise the approaches used to incorporate context into the implementation process: provision of services, equipment or information, on-going engagement with stakeholders, feedback for personnel to address gaps and training and promoting institutionalization.

Discussion/Conclusion: A high number of contextual levels were addressed with a diverse set of methods. In light of the increasing relevance of implementation research for health systems strengthening, incorporating contextual analyses throughout the project and at different levels is critical to improving the health of individuals and populations worldwide.
Reporting of Funding in Health Policy and Systems Research: A Cross-Sectional Study

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Background: Systematic reviewers are expected to collect and report the funding of included primary studies, and to report on their own funding when publishing their reviews. A recent Cochrane methods systematic review found that industry-sponsored studies were more likely than non-industry sponsored studies to report favorable efficacy results and favorable conclusion (relative incidence increased by 27% and 34%, respectively).

Objective: The objectives of this study were: (1) to assess the reporting of funding by original research (systematic reviews and primary studies) addressing health policy and systems research (HPSR); and (2) to assess the policies on reporting of funding of journals publishing on HPSR.

Methods: We conducted two cross sectional surveys respectively for papers addressing HPSR, and journals publishing on HPSR. We included both primary studies and systematic reviews. Teams of two reviewers selected studies and abstracted data in duplicate and independently. They resolved disagreements through discussion, or with the help of a third reviewer if needed. We conducted descriptive analyses and a regression analysis to investigate the association between reporting of funding by papers and the journal’s characteristics.

Results: We included 400 studies (200 systematic reviews and 200 primary studies) that were published in 197 journals. About one third of the systematic reviews and primary studies in HPSR did not report on funding. Only 15% of the systematic reviews and 7% of primary studies reported on the role of funder in the study. Higher impact factor was associated with better reporting on funding in studies (OR: 1.16, 95%CI: 1.00 – 1.35). Although the majority of HPSR journals (95%) required reporting on the source of funding, one third of those journals did not require reporting on the role of funder.

Conclusion: Despite that the majority of journals publishing on HPSR require the reporting on funding, more than quarter of papers addressing HPSR (including both primary studies and systematic reviews) did not report on the funding source. HPSR journals should better implement their funding policies to improve reporting of research funding. The disclosure of funding helps increase the credibility and trust in HPSR by the public and policy-makers.
Poster Abstracts

Geoff Royston, Healthcare Information for All
Poster Number: 92

Essential Healthcare Information for All – a missing indicator for monitoring progress towards the Sustainable Development Goals

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The paper notes a major gap in one of the key SDG target descriptors and associated indicators, proposes ways in which this might be filled and suggests a practical route to implementation. It should be of interest to anyone concerned with SDGs or with Universal Health Coverage.

This paper builds on previous work by Healthcare Information For All (www.hifa.org), including work with the New York Law School (Access to Health Information Under International Human Rights Law) and the Mobile Healthcare Information For All (mHIFA) working group.

The SDG 3 target for Universal Health Coverage (3.8) mentions access to essential healthcare services, medicines and vaccines but there is no mention of access to health information. Yet, from a health systems perspective, universal access to health information is a prerequisite for universal health coverage - it is the starting point for people seeking to care for themselves and their families. Its lack leads to failure to take timely and appropriate, often life-saving, action, especially in low-resource settings where there is a lack of access to trained, well-informed, health workers. This omission is carried through in the various indicators adopted for monitoring progress towards SDG 3.8 (and indeed SDG 3 more generally); none of them refer to information or knowledge.

The paper describes how this gap in the SDG 3.8 target and indicators could be remedied, for example by adding a new indicator that measures such access. This would have merit in its own right for measuring progress on empowering people to have a more active role in their own health. It could also function as a sentinel indicator providing early signs of advance towards universal access to healthcare more generally.

Operationalising such an indicator would seem challenging, given the number and variety of information sources, content, communication channels and audiences. However, developments in communication technology are providing a solution. The paper shows how the huge growth in availability of mobile phones, not least in LMICs, provides a practical route to universal access to essential healthcare information, with a practicable method for monitoring progress towards it.

Finally, the paper will present an assessment of the current position on including a target or indicator covering universal access to healthcare information in the SDGs, using feedback from the forthcoming meeting of the UN Inter-Agency and Expert Group on SDG indicators (in which the lead author is a participant).
Linking participatory action research on health systems to justice in global health: A case study of the Manifest project in rural Uganda

Co-authors: Bridget Pratt - University of Melbourne; Adnan A Hyder - Johns Hopkins Bloomberg School of Public Health

Background: To strengthen health systems in ways that ensure marginalised and disadvantaged groups have access to health services and financial protection demands a robust evidence base. Much health systems research in low and middle-income countries (LMICs) is motivated by the goal of helping improve health systems for disadvantaged and marginalised groups. An ethical framework called ‘research for health justice’ provides initial guidance on how to link health systems research in LMICs to health equity. The framework’s derivation has so far been a largely conceptual exercise, drawing on theory from political philosophy. It thus constitutes a work-in-progress rather than a definitive set of prescriptions. It is open to revisions and negotiations in light of current practice and future conceptual work.

Methods: To further develop the largely conceptual framework, we tested its guidance against the experience of the Maternal and Neonatal Implementation for Equitable Health Systems (Manifest) project, which was performed in rural Uganda by researchers from Makerere University. We conducted 21 in-depth interviews with investigators and research implementers; directly observed study sites; and reviewed study-related documents. Thematic analysis of interview data, project-related documents, and direct observation notes was undertaken.

Results: Our analysis identifies where alignment exists between the framework’s guidance and the Manifest project, providing initial lessons on how that was achieved. Suggestions are made for how other research teams can achieve consistency with the ethical framework’s guidance, e.g. partner with local stakeholders to conduct studies; conduct consultations across national, district, and local-levels, including with relevant vulnerable groups, when selecting research topics and objectives; and employ strategies to promote intervention sustainability, from early in the research project to its end. Our analysis also identifies where non-alignment occurred and gaps in the framework’s guidance. Suggestions are made for improving ‘research for health justice’. These include revising the framework’s guidance on selecting research populations and on providing post-study benefits, and expanding the framework’s guidance on engagement of research users and beneficiaries in setting research topics and objectives.

Conclusions: The revised ‘research for health justice’ framework and lessons on how its guidance is upheld can inform health systems researchers seeking to more systematically connect their practice to the reduction of health disparities between and within countries. It can also inform funders seeking to incentivise and invest in more equity-oriented health systems research through their grants programs.
Scholastica Zakayo, KEMRI-Wellcome Trust Research Programme
Poster Number: 94

**Conducting multi-disciplinary research with families of children admitted with malnutrition – reflections on researchers’ responsibilities to respond to vulnerabilities identified.**

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**Background:** It is recognised that researchers have special ethical responsibilities when working with vulnerable populations. However, the definition of the term vulnerability, as well as its intersections with participant agency and empowerment, are contested, and the responsibilities of researchers in the face of what can be multiple vulnerabilities debated. Debates on vulnerability and researchers’ responsibilities can be enriched by drawing upon the experiences and insights of frontline actors involved in diverse types of health research in a range of settings. This is a key objective of the REACH (Resilience, Empowerment and Advocacy in Women’s and Children’s Health Research) collaboration.

**Methods:** We will present initial reflections from one of several REACH case studies; an international Childhood Acute Illness and Nutrition Network (CHAIN). CHAIN is an observational multi-site cohort study looking at determinants of child survival during and after hospital discharge for malnourished children aged 2 to 24 months, with the overall aim of developing interventions to reduce mortality. We will draw on qualitative work embedded within CHAIN to share ethical dilemmas that we ourselves as health systems researchers / social scientists working in this larger study have experienced. Specifically, we will draw on organised ethics reflection meetings we introduced for ourselves to take place every 2-3 months. By September 2018 we will have held six ethics reflection sessions each of 2-4 hours in length.

**Findings and discussion:** Issues identified to date include: a) the strengths and challenges related to our positionality; of being both part of CHAIN and at the same time examining ethical elements of the network, and b) the difficulty of knowing when and how to intervene in an observational study; where families present with multiple clinical and social needs but where intervening can both undermine (through influencing key outcomes of the study) and save the study (through supporting follow-up visit attendance and completion of data). Reflections will include sharing how we have responded to issues raised including through: a) continuously engaging with and feeding back to the main CHAIN team; b) encouraging reflective meetings across teams and, c) developing and adopting an ancillary document to guide the team on how to respond to those challenging dilemmas.

**Conclusion:** We will relate our experiences to ethical guidelines and recommendations for research, including benefit sharing guidelines, and consider the implications of our findings for other health systems researchers working in similar contexts of vulnerability.
Perceptions of the Vulnerable Child in Uttar Pradesh, India: A Qualitative Study

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Background:

The concept of vulnerability, in regards to human development, is about who is vulnerable, to what and why. The term, however, can be broadly interpreted and needs to be carefully defined in the context of use so that it is measurable and has operational value. Interestingly, there is no specific word in the Hindi language for vulnerability. As such, to explore programs meant to decrease the mortality rate of under-five (U5) children, a health-focused concept of vulnerability was used, referring to those populations who are at higher risk for illness and/or poor health outcomes. The goal was to delineate how childhood vulnerability was perceived by community members, frontline health workers and facility staff in rural Uttar Pradesh (UP), and possible implications for programs.

Methods:

This qualitative study was completed in three districts of UP that are part of a larger child health program. Twelve semi-structured interviews and 21 focus-group discussions, covering 182 participants, were conducted with community members (mothers and heads of households with U5 children), frontline health workers (Accredited Social Health Activists and Auxiliary Nurse Midwives) and facility staff (medical officers and staff nurses). All interactions were recorded, transcribed and translated into English, coded and clustered by theme for analysis. The data presented are thematic areas that emerged around perceptions of the vulnerable child.

Results:

In general, children are considered to be vulnerable due to their developmental phase and dependency. Community members were attuned to childhood vulnerability, drawing from individual and household experiences and largely identified ideas categorized as socio-psychological. The perceptions of vulnerability among frontline health workers included socio-psychological views of the community but also biomedical domains, i.e. low birth weight, prematurity and malnourishment. Facility staff perceived vulnerability in a broader sense, encompassing geographical, social, physical and biomedical domains. However, they did not express the need to apply a vulnerability lens in their routine practice.

Conclusion:

Childhood vulnerability was perceived differently by different groups in the community-facility continuum. However, frontline health workers had perceptions that bridged those of the community and facility staff. Understanding the differences and similarities in perspectives could be used to more effectively target vulnerable children.
The impact of religion on sexual and reproductive health-seeking behaviour in Nigeria: A systematic review of the evidence

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Introduction

International and local discourses on the achievement of the health-related sustainable development goals in Africa often give little or no attention to social science perspectives. The biomedical model of illness and health which is dominant in Western medicine, also continues to be the governing model in most Sub-Saharan African countries, and disease eradication and health improvement efforts are too often, focused on biomedical interventions and health systems strengthening.

The health systems framework from the World Health Organization is often used to analyse health systems and evaluate areas for improvement, yet its authors acknowledge that "it does not take into account actions that influence peoples' behaviours, both in promoting and protecting health and the use of health-care services."

Under the human rights-based approach to health the four elements of availability, accessibility, acceptability and quality (AAAQ) are essential to the enjoyment of the right to health by all. Three of these can be changed through interventions to the health system itself, but acceptability which is often overlooked, can only be improved when one knows the factors that influence and motivate people to seek care and use health services. This study aims to explore the role of religion in the acceptability of sexual and reproductive healthcare to Nigerians.

Method

This is the first phase of a bigger (PhD) project, and involves a systematic review of the evidence on the impact of religious beliefs on the sexual and reproductive health-seeking behaviour of Nigerians.

Results and Discussion.

The anticipated outcome of the study is the identification of the role of religious beliefs in influencing reproductive and sexual health-seeking behaviour in Nigeria. The paper will explore the intersection between religion and public health, with the aim of synthesising existing evidence and contributing to the body of knowledge on the subject (full results are expected April 2018).

Implications for Policy

The goal is to facilitate the engagement of medical practitioners and policymakers with religious beliefs, in such a way as to enable the design and implementation of policies and interventions that are adapted to the context and the people for whom the health system is designed. This should in turn help to improve health, combat diseases, and allow people to receive the healing they ultimately seek.
Supporting community health workers in fragile settings: evidence from Sierra Leone and Liberia

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Background: Community health workers (CHWs) make critical contributions to health systems in Fragile and Conflict Affected settings (FCAS), where human resource shortages are particularly acute. In Sierra Leone and Liberia, the recent Ebola outbreak emphasised the importance of CHWs’ understanding of their communities in the management of the outbreak as well as in re-establishing trust with the health system. In both countries, new CHW programmes have recently been introduced. Yet health planners do not make best use of what CHWs have to offer. This requires better integration into the wider health system and supporting CHWs both to stay in the job and carry out their work effectively.

Methods: We developed two case studies of CHWs in FCAS: Sierra Leone and Liberia. Using multiple methods (document review, in depth interviews with supervisors and decision makers, life histories with CHWs, photovoice, and community mapping) we have explored how CHWs are supported and managed, how they interact with their communities and health systems, and the challenges that they face and how to solve these. Analysis is ongoing.

Results: In Sierra Leone, photovoice illustrates the realities of CHWs work, including challenges in promoting community health (unsafe water, transport challenges especially in rainy season and in riverine communities), and the support that they receive (working with health workers, and gardens to cultivate food for selling and own consumption). Analysis of photos led to joint problem sharing and solving. Support from peer supervisors, allowances for transport to reach isolated communities and participate in meetings, enable them to carry out the job effectively. Recognition of their work by community members and health workers keeps them motivated. Challenges in supporting CHWs include: overcoming the different barriers that male and female CHWs face in visiting homes; and without reliable supplies, CHWs face losing community trust.

In Liberia, selection of only some community volunteers as community health assistants, left the remaining volunteers as disenfranchised and less motivated to continue their role in community health. Rolling out new CHW programmes in FCAS needs to consider the existing volunteers, and power and supervision structures. Poor coordination of the programme amongst the districts as well as limited resources to scale-up the programme hinder effectiveness.

Conclusions: Integration into the wider health systems and effective management and support is vital to ensure that CHWs make the critical contribution needed, especially in FCAS. Continued political will and sustained national investment in the programmes are needed.
Productivity of Community-Based Health Workers for Integrated Malaria and TB Services in Ethnic Areas of Myanmar: A time-motion study protocol

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Background: Throughout decades of civil war in Myanmar, ethnic communities have developed Ethnic Health Organizations (EHOs) which provide vital services and remain the sole or preferred provider in remote, conflict-affected, and underserved areas of the country. Like other healthcare sectors in Myanmar, EHOs are (1) task-shifting to community-based health workers (CHWs) to address critical shortages of providers, and (2) moving away from traditional vertical programming, towards more integrated models of care to achieve universal health coverage (UHC) by 2030. However, services may be integrated without understanding the additional time required to complete all assigned activities, and thereby exacerbate challenges for CHW motivation levels, performance, and attrition. Time-motion studies can be useful for refining workforce and workload planning, but are lacking for CHWs in LMICs, especially those who are available around the clock.

Methods: From May-September 2018, this mixed methods study will combine objective observations of time-motion and qualitative in-depth interviews (IDIs). The study will leverage a natural experiment in which EHOs provide an integrated package of malaria, TB, and primary health services in some villages (intervention) and malaria services only in other villages (control). Eight intervention villages and eight control villages from six EHOs will be randomly selected, and all health workers in selected villages will be recruited for the time-motion study. CHWs will be observed using a standardized, pre-coded tool to capture the type, start/stop times, and location of all activities performed by the CHW for 7 consecutive days. Trained facilitators will conduct IDIs with a subset of CHWs who participated in the time-motion study to capture perceived barriers and facilitators for productivity. Iterative, real-time data analysis and the principle of data saturation will be used to determine the sample size for IDIs.

Results: Descriptive summary statistics of time-motion data including proportions, means, and standard deviations will be calculated. Qualitative data will undergo open coding and content analysis by two independent researchers.

Discussion: This study aims to improve access to integrated health services for communities in underserved ethnic areas of Myanmar by supporting evidence-based workforce and workload planning for EHOs to achieve UHC by 2030. As countries like Myanmar increasingly integrate services and task-shift to CHWs, time-motion studies have the potential to inform strategies to optimize CHW productivity by critically evaluating time-use; the feasibility and acceptability of expanding service delivery; and the specific needs of CHWs (e.g., management capacity) to sustain the effectiveness and quality of community-based care.
Faiza Rab, Western University
Poster Number: 99

Effectiveness of strategies for implementing childhood vaccination programs in fragile countries

Co-authors: Faiza Rab - Western University

Introduction

Despite the emphasis on childhood vaccination programs as being the most effective intervention in reducing childhood mortality, millions of children remain unvaccinated globally; the majority of whom live in countries in ‘fragile states’ with crumbling health infrastructure and poor healthcare delivery.

Hypothesis

Due to lack of infrastructure and poor accessibility, fragile countries are more likely to have gaps in the delivery of immunization programs. To get a measure of pragmatic solutions for supporting health systems within these ‘fragile countries,’ it is imperative to understand how existing services operate in these states. Our aim, therefore, was to identify strategies to improve childhood vaccination uptake in ‘fragile’ countries and compare community-based programs for their effectiveness.

Methods

‘Childhood,’ ‘immunization’ and ‘fragile states’ were key concepts identified for systematic literature search, limited to the English language, conducted between January and March 2017 by two independent reviewers. Screening results were compared at three levels and kappa statistics calculated at each level. Cochrane collaboration criteria and Effective Public Health Project tool (EPHPP) were used to assess the risk of bias.

Data extraction included the year of the study, location, setting, study design, characteristics, type of vaccination assessed in the study, the intervention or campaign, control, vaccination outcomes, study limitations and measures of effect (OR, RR) describing an increase in coverage or decrease in dropout and missed vaccination. Random effects model was used to evaluate the effectiveness of vaccination programs.

Results

Twenty-seven studies published between 1996 and 2016 were identified as effective community-level strategies for childhood vaccinations in fragile countries. Kappa for the three levels of screening ranged from substantial to good (0.75, 0.61, 0.58). The identified strategies included: recall and reminder through SMS texts, phone calls, reminder stickers and cards; health education programs; microplanning strategies; monetary incentives. Data was collected from 43,018 participants. SMS text reminders were found to be the most effective intervention (RR 1.32, CI: 1.14 to 1.52).

Discussion and conclusion

Despite the heterogeneity in vaccination coverage and outcomes, the present study was able to identify key strategies to improve the effectiveness of vaccination delivery in fragile countries. Reminders and recalls through SMS texts and phone calls; educating spiritual leaders, youth and care providers; including communities in planning and implementation of vaccination campaigns and integrating childhood vaccinations with animal vaccinations in pastoralist and nomadic communities are effective ways to improve childhood vaccination in fragile countries.
Purchasing Health Services from Ethnic Health Organizations: A new way to provide health coverage and peace to those forgotten in Myanmar's civil war

Co-authors: Tom William Joseph Youngho Traill-Community Partners International (CPI); Si Thura-Community Partners International (CPI); Zarni Lynn Kyaw-Community Partners International (CPI); Nay Nyi Nyi Lwin-Community Partners International (CPI)

Purpose:

In Myanmar’s border areas, civil wars have been fought since independence in 1948. The central military government did not provide health services and targeted attempts by opposition groups to create health facilities. In the absence of healthcare and faced by a long-term humanitarian crisis, health outcomes remain significantly behind those of the central areas of Myanmar.

The National Ceasefire Agreement (NCA) signed by many armed resistance organizations since 2012 has opened the door to new forms of cooperation to provide health coverage. The new government’s prioritization of UHC has led to consideration of purchasing health services from EHOs as part of peace negotiations. The paper considers the potential of this approach to promote peace.

Focus/Content:

A number of organizations, more or less closely affiliated with armed resistance to the government and known generally as Ethnic Health Organizations (or EHOs), have attempted to provide healthcare to those in need.

It will contain inputs from qualitative research being conducted in 13 communities where purchasing is piloted (into both citizens and health workers) to understand attitudes towards government health provision and the purchasing of health services. It will also contain input from in depth interviews with 10 health leaders on both the EHO and government sides.

Significance for sub-theme and target audience:

Co-operating with EHOs is critical to providing health care to citizens of Myanmar excluded from government services for geographic, linguistic and ethnic reasons. The extent of this exclusion and its sources will be elucidated. The potential of purchasing to be a non-aggressive solution to deliver health for all is explored. In addition, the innovative approach also reveals lessons about the inclusion of private health providers (as EHOs are not governmental organizations) in the health system and community health care (where all of the care is provided).

The target audience will be anyone working in health systems in countries divided by either ethnic strife or civil unrest and charts a new approach to build peace and develop health by cooperation rather than domination by the victor.
Healthcare provision under siege: Health care workers’ strategies to cope with siege challenges in Syria – A qualitative study

Background: Provision of healthcare under siege in armed conflicts is understudied in the global health literature. Throughout the Syrian conflict, many communities have been besieged by different warring parties, and besiegement has often been accompanied by attacks on healthcare as a tactic of war. In this study, we aim to examine healthcare provision in besieged settings in Syria by investigating healthcare workers’ (HCWs) strategies to maintain healthcare provision and to minimise the impact of imposed restrictions.

Methods: Due to limited geographical accessibility, we conducted in-depth interviews using online telephone and messaging applications with thirteen HCWs (doctors, nurses, medical students and a pharmacist) in two besieged areas in Syria – in Douma, Eastern Ghouta (Rural Damascus governorate) and in East Aleppo (Aleppo governorate), between 1st July and 25th August 2017. Transcribed interviews were analysed using thematic analysis.

Findings/Discussion: HCW strategies to mitigate challenges and to maintain healthcare provision under siege were categorized as follows: 1) Managing mass casualty incidents: The majority of HCWs trained in triage and made difficult decisions to be able to manage the overwhelming number of casualties following attacks by indiscriminate weapons against civilians (e.g. barrel and cluster bombs). 2) Improving safety: As health facilities were deliberately targeted, ensuring safety required novel and adaptive measures. HCWs fortified their makeshift hospitals; moved their operation theatres to the basement level; distributed hospitals sections to minimise loss; sent patients to nearby homes after surgery; and trained in handling chemical attacks. Nonetheless, such measures could not adequately protect from advanced warfare such as bunker buster and guided missiles. 3) Managing resources: HCWs developed their own innovative methods to handle shortages in supplies and human resources. They employed telemedicine to overcome the absence of some medical specialities. They shifted advanced tasks to junior doctors and medical students. Furthermore, doctors had to work across different disciplines of medicine whenever need be. In terms of supplies, HCWs made their own painkillers, blood bags and serums. They also sterilised and reused medical consumables.

Conclusion: Understanding strategies of healthcare provision under siege in Syria informs efforts to revise humanitarian preparedness plans in besieged areas in Syria and in other similar contexts.
Using a systems approach to improve newborn care at the community and facility level among displaced populations in South Sudan

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Background: Targeted clinical interventions have been associated with decreased risk of neonatal morbidity and mortality. Yet, in conflict-affected countries, lifesaving interventions face barriers and facilitators to delivery that are not well understood. The Newborn Health in Humanitarian Settings: Field Guide describes a package of facility- and community-based newborn health interventions, including a clinical training package and newborn medical commodities. We implemented this package in displaced person camps in South Sudan with Ministry of Health involvement. We describe key health system bottlenecks and facilitators that should be targeted to improve implementation of the Field Guide.

Methods: We implemented newborn health interventions in displaced person camps in South Sudan from June-November 2016. We used a mixed method case study design to document the implementation. Using the Consolidated Framework for Implementation Research (CFIR) and WHO Health Systems Framework as our guide, we collected primary data using focus group discussions, in-depth interviews, and observations of health facility readiness and midwife time-use. Secondary data were gathered from documents and artifacts associated with the implementation of the intervention during the study period.

Results: Key bottlenecks and facilitators are organized by the health systems building blocks: leadership and governance, health financing, health workforce, essential commodities, health service delivery, health information systems. Findings include: (1) newborn health is seen as a ‘new’ activity in humanitarian response and is therefore excluded from many emergency response proposals; (2) humanitarian workers felt that exclusion of key lifesaving actions, such as resuscitation and treatment of infections, from national reproductive health policies inhibited their ability to implement these interventions; (3) a severe shortage of skilled care at birth was the main workforce bottleneck for implementing quality newborn care; (4) reproductive health kits do not include all recommended newborn supplies; and (5) ongoing supportive supervision, educational materials, and community acceptance of practices enabled community-based newborn interventions.

Discussion: Although progress has been made in recent years to understand how to implement neonatal health interventions, few studies have been conducted in settings with an ongoing humanitarian crises. This study highlights the main health system factors; these can contribute to designing more effective maternal and newborn health programs during crises. Improving integration of newborn interventions into national policies, donor advocacy, training institutions, and humanitarian supply chain systems can expand care provided in these contexts. To effectively implement the 2030 Agenda and realize the SDGs, we must continue to support such efforts to reach the most vulnerable populations.
Dying in the Margins: Palliative Care, Humanitarian Crises and the Intersection of Global and Local Health Systems

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Objectives:

There is no doubt that the primary goal of humanitarian healthcare has to be to save lives. Given the extremity of the crises in which humanitarians respond, not all lives can be saved. There is a growing acknowledgment of the role of palliative care in humanitarian healthcare. Here we present an interpretive description of the experience of palliative care in a variety of humanitarian crisis settings. Our objective is to map the diversity of those experiences and to examine the innovations and inconsistencies of global and local health systems to assess the obstacles and opportunities of these health systems in the support of palliative care during international humanitarian crises.

Methods:

Four case studies were identified through stakeholder meetings and key informant interviews that represent a broad range of humanitarian emergency situations where palliative care needs arise:

A public health emergency: Guinea during the Ebola Crisis; An acute conflict & refugee situation: Syrian refugees in Jordan; A protracted refugee situation: Congolese and Burundian refugees in Rwanda; and, Natural disaster situations: various geographic settings.

For each case study, in-depth, semi-structured interviews exploring experiences, needs, frustrations, and possibilities for palliative care were conducted with patients or family members of individuals with a terminal or life-threatening condition suited to palliative care. Along with interviews with crisis-affected people, local and international humanitarian healthcare providers were interviewed at each site.

Results:

Global and local health systems—-independently and intersecting with each other—emerged as a recurrent source of barriers to the provision of palliative care. Dominant themes include: global restrictions and local cultural anxieties to accessing essential medications for symptom relief; importance of culturally relevant, and locally informed, care and psychosocial support; the lack of international and local palliative care guidelines, training, and support for the provision of palliative care during international humanitarian crisis events. Changes to global health systems and improved interaction between local and international actors were cited as enablers to comprehensive palliative care provision. Palliative care was recognized as an essential component of holistic, comprehensive humanitarian healthcare, and should never act as a substitute to health system improvements for curative care.

Discussion:

The alleviation of suffering is central to the work of humanitarian healthcare, and yet competing priorities often result in a lack of attention to palliative care. Our study presents critical insight onto the role of local and global health systems in the provision of palliative care in contexts of humanitarian crises.
Tackling post-Ebola health recovery: strengthening health system capacity to ensure Ebola Survivors and other vulnerable groups have access to appropriate care

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Background:
During the 2014-2016 Ebola outbreak, several peripheral health units (PHUs) and hospitals were designated throughout the country as priority health facilities to treat and support Ebola Virus Disease survivors (EVDS) after their discharge from Ebola Treatment Units. In 2016, the government launched Comprehensive Program for Ebola Survivors (CPES) aimed to improve the wellbeing of EVDS by providing basic and specialized health care in the areas of ophthalmology, neurology, mental and reproductive and child health. Data was collected from twelve districts in Sierra Leone to understand whether CPES achieved its intended outcomes of addressing the health needs of EVDS, a new group of health care-seekers, while also strengthening health system capacity to address the health needs of other vulnerable groups.

Methods:
The study uses a mixed-methods approach with data collection at baseline and endline to highlight EVDS's disability status and special long term needs, access to care, stigma and barriers faced and the role of community networks in facilitating quality of care received. Qualitative data provide perspectives of health service providers at all levels and survivor networks on provision of care. Project monitoring data provide an overview of the improvements made in the country's health system capacity.

Results:
Baseline analysis (February 2016) showed that 40% of survivors experienced some disability following the infection. Almost 70% who sought care after discharge from the treatment facility went to a PHU; more than half at a district hospital; and very few at a Freetown tertiary hospital. The high referrals were likely because community level “Survivor Advocates” acted as an important bridge between EVDS and health facilities. Project monitoring data show the large increase in health care workers trained or mentored to provide clinical services to EVDS and handle stigma reduction. The overall number and type of referrals are also being monitored and on an upward trend. Findings from the endline assessment to be conducted in April 2018 will demonstrate to what extent the health system continued to support EVD survivor needs, despite programmatic and funding changes, and how other vulnerable groups benefited from CPES interventions.

Conclusion:
Service provision to EVD survivors at the primary, secondary, and tertiary levels offer an opportunity to improve health system service delivery in terms of training and infrastructure to provide services to other vulnerable groups as well as the general population, meeting a critical need for health systems strengthening in Sierra Leone. This paper documents this effort.
Systematic review of primary health care interventions in complex humanitarian emergencies

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Background: Today, more people than ever are affected by humanitarian crises caused by conflict and natural disasters. In these complex emergencies, despite health care being predominantly accessed at the primary health care (PHC) level, there is limited evidence on how PHC services are best delivered. The aim of our narrative review is to synthesise the literature on primary health care interventions in complex emergencies since the Alma Ata Declaration.

Methods: We conducted a systematic review of the published literature by searching Medline, Web of Science, Proquest, Scopus, the Cochrane and WHO libraries and searched the reference list of included studies. We included articles of primary health care interventions carried out by national and international service providers in humanitarian crisis settings between 1978 and 2016. We assessed the mode of delivery of interventions and identified key themes in service delivery.

Results: Twenty-one studies met the inclusion criteria for this review, with an average of four articles published every decade since the 1980s. Seventeen studies looked at PHC interventions in protracted conflict settings, none in acute conflict settings and four in natural disaster settings. Health care is predominantly delivered via mobile clinics in natural disasters and fixed clinics in protracted conflicts. Four studies considered the health impacts of their interventions. We identified these key themes from studies: unsystematic approach to service implementation, poor coordination with local authorities and other sectors, lack of planning regarding continuity of care and community engagement was not considered in any intervention.

Discussion: Considering the major increase in health-related humanitarian activities over the last three decades and the volume of services provided at the primary health care level, the evidence base on primary health care interventions in humanitarian crises is significantly lacking. The changing nature of the humanitarian landscape and the increasingly complex health care needs of people affected by humanitarian crises requires multi-sectoral action, best delivered at the primary health care level. The humanitarian sector needs to engage in discussion and re-focus efforts on ensuring that the most vulnerable populations have access to the most basic level of health care.
Jackline Odhiambo, Liverpool School of Tropical Medicine
Poster Number: 106

**Evaluating health systems resilience using real-world indicators from South Sudan (2011-2015)**

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**Background:** The concept of health systems resilience (HSR) is gaining rapid traction in international discourse. A recent systematic review defines HSR as ‘a system’s ability to continue to meet its objectives in the face of challenges’. However, the lack of clarity on HSR definition, characteristics and indicators for measurement impedes its appropriate application. This study will test HSR definitions and indicators using health system data from South Sudan. As a fragile and conflict affected (FCA) country, South Sudan falls within the high priority countries for HSR interventions.

**Methods:** Using multi-time population cross-sectional surveys and health facility assessments between 2011 and 2015, we will assess associations between health coverage and health system infrastructural variables. Women of reproductive age and children aged 0-59 months are included in the study. The primary outcome variable is a measured improvement using a maternal and child health (MCH) coverage index that combines several key MCH coverage indicators to provide a multidimensional measure of health coverage; the index includes several health system components. We use a multivariate logistic regression model and report risk ratios with 95% confidence intervals to assess the relationship between direction of change in the predictor health system variables and the outcome coverage indicators. Sub-group and sensitivity analyses are included in individual health coverage indicators (skilled birth attendance, measles vaccination, malaria treatment), the size of change in the predictor variables, and national and state level HSR.

**Results:** This research is from an ongoing masters dissertation at Liverpool School of Tropical Medicine (completion date: August 2018). The current findings show definite improvement of key sustainable development goals’ variables for maternal, child and reproductive health. These results are striking but not uniform in the country. The pattern appears to reflect the definition of organisational resilience which means that the health system is adapting to different political military and ecological conditions found in the 10 states of South Sudan. Further analyses will clarify the health system infrastructural variables that explain this variation at the county and state levels. We will identify variables that predict HSR in a FCA country and in the administrative units comprising it.

**Conclusions:** Operational definition for HSR as well as clear and specific indicators for measuring HSR are central to developing effective strategies and interventions for nurturing HSR, especially in FCA countries. The current definition is non-specific. However, when outcome indicators are associated with health system infrastructural indicators, HSR has meaning.
Mobilizing health systems to protect rural households in conflict-affected states: lessons learned from a mixed methods impact evaluation in the Democratic Republic of Congo

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Background: Achieving universal health coverage in conflict-affected states is challenging. An example is the Democratic Republic of Congo (DRC), a country that has experienced four decades of sporadic conflict and where health indicators are among the lowest in the world. Despite the need for a more responsive health system, the evidence base for improved policy decision-making is weak, due to limited research capacity, lack of transportation and communications infrastructure, security challenges, and limited funding for systems research. This presentation reports on findings and lessons learned from an impact evaluation of the DFID-funded Accès aux Soins de Santé Primaires (ASSP) Project, a complex systems strengthening initiative that aims to improve reproductive, maternal, and child health outcomes for 9 million persons in 52 health zones.

Methods: The study uses a mixed-methods research design conducted in four provinces: Nord Ubangi, Sud Ubangi, Maniema, and Tshopo. The quantitative component utilized a difference-in-differences method with community fixed effects to compare changes in child health status, service utilization, household health expenditure, and quality of care over time between households in intervention areas and matched comparison areas. Data came from baseline and follow-up population-based household surveys and linked community, facility and health worker surveys administered in 2014 and 2017, respectively. Baseline surveys were also conducted in Kasai and Kasai Central provinces, but not at follow-up due to security concerns. The qualitative study component employed key informant interviews, in-depth interviews and focus group discussions among a broad range of stakeholders and beneficiaries to explore perceptions of project implementation and reasons why selected strategies worked or did not work.

Results: Community participation, several measures of service quality, childbirth in a health facility, and diarrhea prevalence among children increased significantly in intervention areas when compared with matched comparison areas. However, the estimated effects on modern contraceptive use, antenatal care, child nutrition, and treatment for childhood illnesses were insignificant. The qualitative analysis uncovered a number of possible explanations, including challenges in management and coordination, which were often exacerbated by the remoteness of the project areas, and social and contextual factors that affected the uptake of facility- and community-based interventions supported by the project.

Discussion/conclusions: Based on the evaluation experience, several lessons learned for future research are discussed, including the importance of a) being able to adapt to recurring crises, b) partnering with local institutions to build research capacity, and c) properly accounting for social and programmatic context.
Mohamed Jelle, UCL Institute for Global Health
Poster Number: 108

Understanding the causes of under-five mortality in a humanitarian emergency using verbal autopsy: evidence from Internally Displaced Persons (IDP) camps in Afgooye Corridor, Mogadishu, Somalia

Co-authors: Mohamed Jelle Adan-UCL Institute for Global Health; Edward Fottrell-UCL Institute for Global Health; Carlos S Grijalva-Eternod-UCL Institute for Global Health; Cassy L Cox-Concern Worldwide; Kate Golden-Concern Worldwide; Andrew J Seal-UCL Institute for Global Health

Background: People in humanitarian emergencies often experience adverse health outcomes and excess mortality. However, in these settings, information on the causes of death is sparse due to a lack of vital registration systems. Verbal autopsy (VA) is the process of interviewing close caregivers of the deceased to gather data on the symptoms, signs and circumstances preceding death to determine its likely cause. It remains the best available option for assessing causes of death in such settings. In 2016/2017 Somalia experienced a severe drought that left about 6.2 million people in need of humanitarian assistance and displaced about 1.2 million. This study was conducted to provide reliable and timely evidence on the causes of under-five mortality in Internally Displaced Persons (IDP) camps in Mogadishu, to inform humanitarian response planning and implementation, and to explore the suitability of VA for identifying causes of child death during humanitarian crises.

Methods: All deaths of IDP children aged 6-59 months occurring in twenty camps in Afgooye Corridor during the period of April 2016-July 2017 were identified using monthly household visits by community health workers. VAs were conducted by two trained field workers, who gathered data from caregivers of the deceased through face-to-face interviews and direct capture using mobile phones. Bayesian InterVA software was used to assign likely causes of each death.

Results: Out of 138 recorded deaths (61 male), VA data were gathered for 126 children (59 male), with an overall response rate of 91%. The five leading causes of death were diarrhoeal diseases (28.8%), severe malnutrition (19.3%), measles (14.3%), HIV/AIDS related (10.9%) and acute respiratory infections (10.2%). Common infectious diseases (diarrhoea, measles, HIV/AIDS, ARI and malaria) and malnutrition accounted for 94.4% of the deaths.

Conclusions: Real-time mortality surveillance using verbal autopsy (VA) is feasible within the protracted humanitarian context of Mogadishu. Resulting data have the potential to inform policy, planning, and priority setting. The high levels of under-five mortality from infectious diseases and malnutrition reflect the poor health status of the population and health care systems available to the IDP. That 14.3% of deaths were caused by measles in an accessible urban area is alarming. Methodological advances in the use of VA including digital data gathering and automated analysis helped overcome previous barriers to the application of VA in humanitarian contexts.
Un hôpital résilient ? Le traitement de la tuberculose dans la région du Kilimanjaro en Tanzanie au Kibong’oto national infectious disease hospital

Co-authors: Fanny Chabrol-CERMES3, Villejuif and CEPED, Parus; Alex William Mbuya-Kibong’oto Infectious Disease Hospital, Kilimanjaro, Tanzania; Christoph Gradmann-Institute for Health and Society, University of Oslo, Norway

Introduction. Crée en 1926 par des médecins britanniques au nord du Tanganyika, l'hôpital Kibong’oto a depuis cette date été spécialisé dans le traitement de la tuberculose. Etabli dans la région du Kilimanjaro en tant que sanatorium, cet hôpital s’est maintenu de façon exceptionnelle jusqu’à aujourd’hui en tant que centre de référence pour la tuberculose et notamment la tuberculose résistante (MDR-TB) depuis 2009.

Méthodes. Cette recherche a été conduite dans le cadre de l’ERC GlobHealth associant histoire et anthropologie : un travail sur les archives de cet hôpital (excavation des documents et création d’un catalogue) a été conduit par Christoph Gradmann conjointement à une enquête ethnographique réalisée entre 2017 et 2018 grâce à des observations dans les services de prise en charge et 32 entretiens semi-directifs avec le personnel soignant, administratif et technique de l’hôpital.

Résultats. Cette enquête a documenté les différents moyens humains, financiers, matériels grâce auxquels l’hôpital a pu s’adapter, sur plusieurs années et décennies, aux changements épidémiologiques, aux régimes de traitement, et plus largement à son contexte social et économique de la région. L’insertion de l’hôpital dans son environnement, la stabilité de l’infrastructure et la capacité des équipes et du leadership à se projeter dans le futur apparaissent comme des éléments clés de sa capacité d’adaptation.

Réadaptation du système de recherche pour la santé post-Ebola en Afrique occidentale : focus sur la promotion de la recherche pour l’action de santé publique

Co-authors: Alpha Ahmadou DIALLO-Université de Conakry & Ministère de la santé; Peter GRABITZ-Université de Berlin; Fatoumata Biro DIALLO-Université de Conakry

Background

L’Afrique occidentale a connu des changements défavorables à la préservation et au maintien de la santé au cours des dernières années à cause du fardeau des maladies émergentes et persistantes imputables aux transitions démographiques, la dégradation de l’écosystème, le profil épidémiologique, la pauvreté et la contre-performance des systèmes de santé. Cela est aggravé par l’iniquité dans l’allocation des ressources, le faible accès aux services de santé incluant les médicaments de qualité entrainant ainsi, la marginalisation continue de ceux qui en ont le plus besoin.

Il est essentiel de mettre le focus sur les débats constructifs sur les moyens et schémas d’amélioration de la santé et la collaboration mettant en exergue l’interface homme-animal l’approche “One Health” pour la fourniture des services de qualité, intégrés, continus et les alliances sociales ainsi que les applications technologiques et l’engagement communautaire qui favorisent la santé de chacun et de tous.

Méthodes

Essentiellement participative, l’approche a consisté à la revue documentaire et les entrevues.

L’analyse, construit articulé autour des interactions dans la recherche clinique et l’utilisation des résultats pour l’action de santé publique en matière de lutte intégrée contre la maladie.

Résultats


Les systèmes de santé s’étendent désormais au-delà de la prestation de soins pour agir sur des facteurs environnementaux complexes qui influent sur la santé par le biais de la recherche collaborative pour la santé.

Conclusion

Les résultats ont démontré comment les connaissances et les données influent sur la santé dans différents contextes. L’analyse critique des défis méthodologiques liés à la recherche apportent des preuves des enjeux et de la portée de la collaboration en matière de santé et développement.

Mots clés: développement, Recherche, connaissances, santé publique, action.
**Infirmeries scolaires et gestion de la santé sexuelle et reproductive des adolescents au Togo**

Co-authors: Kokou KPEGLO-Cabinet d'Expertise en Recherche - Action (CERA); Koffi Bléwussi TEKOU-Cabinet d'Expertise en Recherche - Action (CERA)

Les structures nationales en charge de la santé sexuelle en Afrique Subsaharienne et en particulier au Togo ne prennent pas suffisamment en compte les spécificités de la santé sexuelle et reproductive des adolescents en milieu scolaire. Cependant il existe dans le cas du Togo peu d'études pour comprendre les difficultés qu'éprouvent des structures nationales de gestion de la santé à mieux prendre en charge les adolescents en milieu scolaire par rapport à leur santé sexuelle.

La question fondamentale de cette communication est de savoir, si les infirmeries scolaires arrivent-elles à répondre au mieux aux besoins de santé sexuelle et reproductive des adolescents en milieu scolaire? Cette communication a pour objectif de montrer à travers l’analyse d’une étude conduite en 2013 dans les collèges et lycée publics, comment la prise en charge des adolescents en milieu scolaire en matière de santé sexuelle est organisée. Elle vise aussi à montrer comment ces infirmeries répondent au mieux aux besoins de santé sexuelle et reproductive des adolescents.

A travers l’analyse et l’exploitation des données de l’étude précitée, il ressort que les services offerts par les infirmeries scolaires sont limités et non intégrés en raison des contraintes relatives à l’inadéquation des infrastructures, des équipements et des ressources humaines. À titre d’exemple, sur les 147établissements recensés dans l’étude nécessitant une infirmerie, 21 seulement en disposent et 10 ont des locaux et 9 d’équipements répondant aux normes nationales. Ces infirmeries sont créés par les associations de parents d’élèves et l’État. En dehors des soins de base qu’elles offrent, peu de services sont proposés pour renforcer les compétences pour la vie des adolescents qui inclut le fonctionnement du corps humain et le fonctionnement des organes surtout sexuels, la contraception, l’adolescence et ses caractéristiques pour éviter les grossesses précoces, le VIH/sida, la toxicomanie, les diverses infections sexuelles auxquelles les adolescents sont très exposés au Togo.

En comparant les résultats et les normes nationales, l’analyse de cette étude montre tout le potentiel des infirmeries scolaires du point de vu dépistage et prise en charge des infections sexuellement transmissibles dans les écoles. En 2017 par exemple, 15 011élèves ont consulté dans ces infirmeries et 575 nouvelles utilisatrices de PF enregistrées.

Au Togo, les infirmeries scolaires apportent au système de soins des adolescents en termes d’offre de services curatifs, et de prévention, mais des efforts sont à faire pour améliorer la couverture pour épargner les adolescents des risques.
Fatou CAMARA, CATHOLIC RELIEF SERVICES
Poster Number: 112

L’Implication des communautés pour une identification et une alerte précoce des maladies sous surveillance à travers la stratégie (Comité de Veille et d’Alerte Communautaire (CVAC))

Co-authors: Fatou NIANG CAMARA -CATHOLIC RELIEF SERVICES; Chrestien YAMENI-CATHOLIC RELIEF SERVICES

Une réponse précoce et salutaire face à une épidémie dépend d’une détection précoce qui ne peut se faire sans l’implication effective du niveau communautaire ; l’expérience de l’épidémie a virus Ebola dans la sous-région Ouest africaine en est l’exemple le plus illustrant. Au Sénégal, une évaluation conjointe externe a mis en exergue les lacunes du système de surveillance incluant celles du niveau communautaire. Le renforcement du système de surveillance et son extension au niveau communautaire constitue ainsi une priorité pour le Sénégal à travers le Ministère de la santé et de l’action Social (MSAS) avec le support de différents partenaires technique et financiers (PTF).

La surveillance communautaire des maladies à potentiel épidémique dans ce contexte s’appuie sur les « Comités de Veille et d’Alerte Communautaire » (CVAC). Le rôle des membres du CVAC est de rechercher tout cas présumé de l’une des huit (8) maladies sous surveillance (choléra, fièvre jaune, rougeole, tétanos néonatal, diarrhée sanglante, poliomyélite, méningite et la maladie à virus Ebola) ou tout événement/rumeur inhabituels, conformément aux définitions de cas communautaire élaborées et validées par le niveau central. Toute alerte identifiée est immédiatement notifiée par téléphone à l’infirmier Chef de Poste (ICP) qui se chargera de mener les investigations nécessaires dans les 48H pour confirmer ou infirmer l’alerte. Une fois l’alerte confirmée, l’ICP suivra les instructions du niveau central pour la gestion de cas suspects en fonction de la maladie suspectée incluant le prélèvement du cas suspect et le remplissage des fiches de notification qui seront acheminés vers le Point Focal Surveillance (PF/SE) du district, puis au PF/SE de la région et enfin les prélèvements sont acheminés vers le laboratoire de référence au niveau central (Si nécessaire) pour analyse. La formation des acteurs communautaires, leur équipement, une supervision régulière et une évaluation intermédiaire ont été des préalables de mise en œuvre. L’appropriation par la pyramide sanitaire est garantie par le partage des résultats et l’évaluation de la mise en œuvre avec les parties prenantes.

Six mois après la mise en œuvre, 108 alertes de maladies à déclaration obligatoire ont été reçues dont 52 cas ont été confirmés cas suspect.

Le Modèle CVAC a permis l’amélioration des performances en matière de surveillance épidémiologique et la prise de décision pour une riposte précoce. Fort des premiers résultats obtenus, les discussions sont engagées pour une extension dans 3 autres régions et plus tard à l’échelle national.
L’autonomisation des communautés dans un système local de santé efficace au Bénin : du symbolisme à la réalité

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Contexe
Selon l’OMS, « la santé constitue l’un des droits fondamentaux de tout être humain ». La santé passe par l’autonomisation des communautés et un rôle accru des gouvernements municipaux dans la santé. Au Bénin, la participation communautaire s’est traduite par la mise en place des organes de cogestion avec certaines limites. Depuis 2015, Enabel et le Ministère de la Santé développent un modèle de système local de santé (SYLOS) s’inspirant de la déclaration de Dakar.

Méthode
Dans le but d’améliorer l’offre des soins de qualité dans les départements du Mono, du Couffo, de l’Atacora et de la Donga, l’intervention a consisté à i) organiser et renforcer la demande de soins (PUSS[1]) à travers la satisfaction des usagers et la gestion des plaintes et ii) renforcer le rôle des gouvernements locaux ii) renforcer l’articulation entre les acteurs du SYLOS.

Résultats :
Une communauté organisée au travers des PUSS renforcées :

1) Amélioration des capacités se traduisant par un niveau de performance des PUSS en progression passant de 19% (04/2015) à 61% (12/2017) ii) contribution à l’expression individuelle et collective dans les espaces de concertation et de redevabilité.

Gestion des plaintes :

1) Un recours existe pour les usagers en cas d’insatisfaction ii) le pourcentage de plaintes traitées est passé de 33% à 82% entre 2015 et 2017 iii) les données sont exploitées lors des supervisions, iv) création d’un comité de gestion des plaintes inclusif dans les hôpitaux.

Articulation entre les acteurs du SYLOS à travers les espaces de concertation :

i) Un dialogue délibératif instauré avec une meilleure compréhension de la complexité des enjeux et la transparence du processus décisionnel, ii) contribution au renforcement de la décentralisation et autonomisation des communautés iii) amélioration de la qualité des soins.

Conclusion
Un SYLOS intègre et autonomisant nécessite une société civile organisée qui assure la collecte et le traitement des informations auprès des communautés à travers deux mécanismes : les enquêtes de satisfaction et la gestion des plaintes. Les négociations et actions de plaidoyer se basent sur ces données lors du dialogue entre les acteurs du SYLOS pour une meilleure adéquation entre les attentes des populations et les services de santé

La structuration de la demande et le renforcement des capacités ont été un préalable au développement du SYLOS. L’autre déterminant est l’indépendance de la PUSS vis-à-vis de l’offre.

[1] Plate-forme des utilisateurs des services de santé
Comment la connaissance scientifique informe le processus politique? Le cas de la politique nationale de protection sociale du Burkina Faso.

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Le gouvernement du Burkina Faso s’était engagé en 2009 dans un processus qui a abouti à l’adoption une Politique Nationale de Protection Sociale (PNPS) en 2012. La présente proposition vise à présenter les résultats préliminaires d’une recherche empirique sur le cheminement des résultats de recherche/connaissances dans le processus d’émergence et de formulation de la PNPS.


Formulation : La note de cadrage qui a orienté le contenu de la politique reprend les concepts, et les stratégies des entrepreneurs politiques. Un faible soutien ou volonté politique se traduisant par la faible implication des décideurs/fonctionnaires de haut niveau dans le processus a été constaté. Les acteurs n’ont pas fait des choix en fonction des connaissances sur ce qui fonctionne dans le contexte burkinabé. Ils ont compilé l’existant, puis intégré des stratégies qui peuvent intéresser les entrepreneurs politiques (logique de capatage de ressources financieres ).

Les connaissances utilisées dans le processus d’émergence vont au-delà de la recherche académique. Le contexte politique a favorisé la réceptivité des acteurs à se servir de la connaissance pour comprendre et problématiser le déficit de protection sociale. En revanche, la formulation a été orientée par les intérêts des acteurs locaux, les idées et cadres conceptuelles des acteurs internationaux sans une réflexion contextuelle. La volonté politique pour résoudre un problème est nécessaire pour favoriser la prise en compte de connaissance dans la formulation des politiques.
Money for What? Making sure community needs are visible to the Global Financing Facility

Co-authors: Joyce Kyalo-Options (Kenya); Patricia Doherty-Options Consultancy Services UK; JohnPaul Omollo-HENNET; Peter Gichangi-International Center For Reproductive Health; George Ogola-Options (Kenya); Olivia Tulloch-Options Consultancy Services UK

Purpose

Civil society engagement is critical to advancing RMNCAH. Efforts to strengthen health systems – for example, the Global Financing Facility (GFF) – are often accused of ignoring Civil Society’s key role.

The GFF mechanism aims to close the funding gap for reproductive, maternal, newborn, child and adolescent health (RMNCAH) by bringing together funds from multiple sources. Evidence for Action-MamaYe (E4A) has supported novel approaches to share and translate knowledge in ways that support increased civil society participation in the GFF.

Focus / Content

In 2017, E4A supported a coalition of civil society organizations (CSOs) in Kenya – The Health NGOs network, HENNET – to develop innovative ways to share and translate complex information in GFF investment cases, financing strategies and governance guidance: i) the Investment Case Brief which summarises what the GFF is, why Kenya needs the investment, who will benefit from the GFF, how the money will be used and its expected impact; ii) An innovative GFF Country Scorecard tracks GFF progress and is used to facilitate dialogue among key stakeholders and civil society to ensure decision-makers are held to account for their RMNCAH commitments.

Previously in Kenya, CSOs had limited knowledge of what the GFF was and how it worked. These innovative mechanisms facilitated a greater understanding of the GFF process among CSOs, particularly on how it translates to the Kenyan context, and how counties can use GFF funds to effectively respond for their communities’ needs. CSOs now participate in discussions relating to GFF implementation with the Ministry of Health nationally and sub-nationally, ensuring greater accountability for the use of funds and performance against key RMNCAH indicators.

Relevance to the sub-theme

The GFF Investment Brief and scorecard are important because they equip stakeholders, including civil society, with necessary knowledge and tools to engage in GFF discussions and ensure health policies, budgets and expenditures respond to community health needs. These enable CSOs to be more effective at advocating for fund allocation. In February 2018, for the first time, CSOs sensitised communities on key health issues and needs and the budget process – ensuring the community was able to articulate their needs during the public participation part of the budgeting process.

Target Audience

Trialled in Kenya, the Investment Case Briefs and Scorecards can be adapted to any country that wishes to ensure community needs are reflected and visible in their RMNCAH-N policies and the roll-out of the GFF.
Examining multiple funding flows to healthcare providers- a case study from Kenya

Co-authors: Rahab Mbau-KEMRI-WELLCOME TRUST; Evelyn Kabia-KEMRI-WELLCOME TRUST; Edwine Wafula Barasa-KEMRI-WELLCOME TRUST

Introduction

Healthcare providers often engage with multiple purchasers resulting in multiple funding flows. Where multiple funding flows exist, they may send signals to providers that may incentivize undesired behavior that could compromise equity, efficiency, and quality. We examined the characteristics of multiple funding flows to public hospitals in Kenya and how they influence provider behavior, and the likely implications on equity, efficiency, and quality.

Methods

We conducted a cross-sectional qualitative study in two first referral and two second referral public hospitals, purposively selected from two counties in Kenya. We collected data using in-depth interviews (n=36), focus group discussions (n=4), and documents review, and analyzed them using a framework approach. We described these funding flows in terms of their magnitude, incentives, and accountability requirements, and explored their potential implications for provider behaviour and health system goals of equity and quality.

Results

First referral public hospitals received funding from four sources (county governments, the National Hospital Insurance Fund (NHIF), user fee collections, and donors). In addition to these four sources, second referral public hospitals also received funding from the national government. Both types of hospitals experienced 12 identifiable funding flows across the range of their funding sources. Higher NHIF payment rates for outpatient services for civil servants compared to non-civil servants and, higher NHIF payment rates for inpatient services for all its beneficiaries compared to user fees led to discriminatory behavior in some hospitals. For instance, civil servants were permitted to jump queues (and hence had shorter waiting times) while other patients waited to be served at the healthcare facility. In case of drug stock outs, civil servants were assured of getting medication through the hospital's arrangements with private pharmacies while other patients had to buy the drugs themselves. This discrimination was also accompanied by shifting of resources to provide preferential services to civil servants or in other cases, insured patients in general. For instance, some facilities established special civil servants' clinics and wards while others had amenity wards for all insured patients that were better staffed and equipped than the general wards and clinics for the uninsured patients. These provider behaviors of discrimination and resource shifting are likely to result in inequity in access and compromised quality of care.

Conclusion

Where multiple funding flows exist, there is a need to structure them coherently so as to mitigate undesired provider behavior that may compromise health system goals of equity and quality.
The Evolution of Universal Coverage of Health Insurance and Hospital Charges in China

Yan Song, Shandong Academy of Medical Sciences
Poster Number: 118

Background

In the past six decades since 1949 there is no national health insurance scheme (NHIS) in China. Only about 14% of the total population was covered by the employer-based Government Health Insurance (GHI) and Labor Health Insurance (LHI) plans. It was the beginning from 2003 that China started to reform health insurance scheme aimed to establish NHIS and reduce financial burden of health care. It focused on two main types of insurance: New Rural Cooperative Medical Schemes (NRCMS), which was initiated in 2003 for rural populations; and Urban Resident Basic Health Insurance (URBMI), which began in 2007 for urban residents. The objective of this study was to evaluate the effectiveness since 2003 of health insurance reform policies toward universal health insurance coverage by tracking the universal coverage rate (UCR) among inpatients and examining the hospital charges of insured inpatients.

Methods

156,889 inpatients data from Southern China tertiary hospital dated from 2003 to 2011 were used in this study. Based on descriptive analysis, Chi-square test and t-test were used to check for statistical differences; Degree of Structure Variation (DSV) was performed to analyze the evolution of hospital charges.

Results

The results showed a substantial increase in UCR, from 42.8% in 2003 to 68.3% in 2011. The CR increased 47% for children (<18) and 42% for the unemployed. Their contribution to universal coverage growth was 27%, 25% respectively. And there were two obvious growth peaks for UCR in the period studied: Year 2004 and Year 2008. The total hospital charges for insured patients increased from 4.5 million to 14.4 million CNY. The hospital charges per case increase from 7298.4 to 7880.5 CNY and there was no significant difference between the insured and uninsured cases. The DSV of hospital charges was 15%. And the drug and exam cost contributed 56% to this DSV.

Conclusions

Our study indicated that despite the wide expansion of coverage, the impact of health insurance reforms for cost containment was still limited. The increase of children and unemployed involved in health insurance contributes about 50% of universal coverage growth. The drug cost and exam cost make the most contribution to the increase of total charges, accounting for 56%.
Spillover Effects of an Employment Guarantee Scheme on Maternal Healthcare Services in India

Co-authors: Divya Parmar-City, University of London; Aneesh Banerjee-City, University of London

Background: We assess the impact of India’s National Rural Employment Guarantee (NREG) scheme, the world’s largest work welfare scheme, on healthcare utilisation. The primary objective of NREG is to improve the financial status of rural households by guaranteeing one hundred days of employment in unskilled manual labour. We expect that participating in NREG improves the household cash flow, thereby allowing members to overcome financial barriers, such as out of pocket payments, to utilise maternal health services at a facility. We also study the spillover effects of the scheme on non-participants. Given the nature of the developmental work undertaken as part of the scheme, we expect the wider community to benefit from the projects. To understand this spillover effect on non-participants, we look at the impact on different sub-groups, most notably, by household wealth and caste.

Methods: Using a nationally representative household survey and a difference-in-differences approach that exploits the phased rollout of the scheme, we estimate the impact of NREG on utilisation of maternal healthcare services: mainly deliveries in health facilities.

Results: We find that contrary to our prediction, NREG did not increase facility deliveries, even though, in line with the expectations of the primary objective, the scheme did lead to a small decline in borrowing. Furthermore, sub-group analyses reveal that among poorer households, which are more likely to participate in NREG, there is, in fact, a reduction in facility deliveries while home deliveries increased. There was no impact on households belonging to marginalised castes. However, we find evidence of spillover effects of NREG – impacting the health-seeking behaviour of non-participants. Among the relatively richer households, NREG led to a shift in utilisation from private to public facilities indicating a possible elite capture of the public health system. Areas that suffered droughts or floods in the previous year had the largest increase in facility deliveries, reduction in home deliveries, and reduction in borrowing.

Discussion: Many low-income countries have used Employment Guarantee Schemes (EGS) to address issues of poverty. In sub-Saharan Africa alone, around 150 EGS are currently active. These “workfare” schemes provide social security in poor countries where other “welfare” programmes are unavailable (e.g. unemployment benefits). In addition, EGS creates spillover effects due to improvements in local infrastructure that benefit not only to the EGS participants but also non-participants. However, elite capture, as we observe in the early years of NREG introduction, can undermine the benefits of the schemes.
Leveraging the existing local saving groups to finance health care in rural communities; Lessons and opportunities for universal health coverage

Noel Namuhani
Makerere University, School of public health
Poster Number: 120

Background, Limited financial resources remain the major deterrence of health care access especially among rural communities. Over 37 million people in East Africa are engaged in the local saving groups to save money for emergency assistance, festivals and funeral expenses especially in rural communities. However, saving for health in the local saving groups has not been much explored.

Objectives, To present lessons on leveraging local saving groups as an opportunity to finance health care in rural communities in order to advance the UHC agenda and SDG goal 3

Methods, Document review was done. These included case reports, newspaper articles, blogs, briefs and research articles across different countries

Results, Saving groups provide members with a secure place to save money, generate a pool fund, and an opportunity to borrow in small amounts, and affordable basic insurance services. However these saving groups grapple with issues of bad debtors, Safety of the money in the villages, lack of financial management capacity. Some attempts have been used to solve the issues; taking legal action against bad debtors, Cooperation with banks, training, Linkage to modern financial banking through mobile banking.

In Uganda, Supporting local saving groups increased use of maternal health services, and improved facility deliveries. In India, it supported members to afford timely payment of premiums for a community based health insurance.

Saving groups reach many people, even the poor are able to save and there is a high level of willingness to save. This provides an opportunity to encourage saving for health, of savings can be used to pay premiums, and also stepping stone for initiating community health insurance scheme.

Conclusions; Local saving groups provide an opportunity for rural communities to save and generate a resource pool for health. Provides a basis for initiating health insurance schemes and enables community to meet the premiums.
Ekpenyong Ekanem, Abt Associates
Poster Number: 121

Sustaining vertical programs through a synergy between health financing and service delivery mechanisms – an implementation framework for multi-sectoral action


Background: Nigeria’s HIV/AIDS response is heavily reliant on external financing. The National AIDS Spending Assessment 2013 revealed that 70% of all HIV spending is from external sources. Thus transition and sustainability of donor-funded programs for HIV, Malaria; TB etc. should be a priority. Only recently have sustainability concerns gained prominence leading to an emergence of policy recommendations to integrate such programmes with the general health systems; financially and operationally. Transforming policy into practice is yet to receive adequate attention and this transformation is what the described framework addresses.

The recently established Lagos State Health Scheme (LSHS) is a health financing mechanism that will increase population access and service coverage for critical interventions (potentially including HIV/AIDS, malaria, and TB), to achieve equitable financial risk protection.

Method: The USAID funded Health Finance and Governance project worked with Lagos State’s Health Financing Unit, the Lagos State Health Schema Management Agency, the Lagos State AIDS Control Agency and donor implementing partners to develop an implementation framework for the integration of vertical HIV/AIDS programs into the LSHS. This framework focuses on providing answers to three critical questions: What is the financial impact on the premium of adding HIV/AIDS services to the LSHS benefits package? What is the technical capacity of the LSHS provider network to deliver quality HIV/AIDS services? What are the operational requirements for achieving a seamless delivery of HIV/AIDS services on the LSHS?

Results: On financial feasibility, an actuarial analysis revealed that additional NGN 209.40 (~US$0.60) per person per year on the premium will cover the integration of HTC, PMTCT, and ART into the benefits package. On technical feasibility, a service availability mapping showed that 75% of facilities on the LSHS provider network already offer one or more HIV service components. From the operational perspective, an integration plan phased into an immediate and medium-long term has been developed to address identified issues around: delivery of commodities and supplies, integrating monitoring and evaluation, capacity building, provider payment and service quality assurance.

Conclusion: Working collaboratively to identify feasibility challenges and achieve synergy between financing and operational mechanisms was critical for integrating donor-funded programs with shared responsibility and accountability. Consequently, HTC, PMTCT, and ART services are in the LSHS benefits package. Operational processes are being established for their delivery. The HFG Project is taking the lessons learned from HIV and incorporating them into a similar process for TB.
Global aid for nutrition specific and sensitive interventions, and under-five child mortality: Does the type and channel of aid matter?

Co-authors: Hina Khalid-Information Technology University ; Sitara Gill-Information Technology University ; Ashley Fox-State University of New York at Albany

Background

Over the last decade enthusiasm for achieving the sustainable development goals has been met with an increase in development assistance for health (DAH). This increase in DAH has led both to an increase in the number of players in the aid landscape (government, non-governmental organizations and multilaterals) and a debate on the benefits and perverse effects of scaling-up versus scaling back DAH. Recent debates have also centered around what kind of interventions DAH should support- vertical, disease-specific versus horizontal health systems interventions. Nutrition has remains a contested category viewed as essential to achieving primary health care objectives, but as falling outside of the direct ambit of the health system. Thus, despite the increase in DAH, nutrition continues to remain an underfunded area. Little attention has been given to understanding the relationship between under-five child mortality and aid for nutrition specific versus sensitive interventions, and if these effects vary by the type of player through which aid is channeled.

Methods

We examine the relationship between under-five child mortality and development assistance for nutrition specific and sensitive interventions to low and middle income countries and adjust for country level confounders such as GDP per-capita, population, urban-residence, literacy and fertility rates using two way fixed effects models (2002-2013). We construct our panel using the Creditor Reporting System (CRS), World Health Organization and World Development indicators databases. Our final estimation sample includes 10,55 country-years.

Results

We find that a 1 percent increase in development assistance for nutrition-specific interventions have led to a reduction in under-five child mortality of 4 per 100,000 and 2 per 100,000 for nutrition-sensitive funding over this time period. When stratified by type of player, total nutrition specific and sensitive aid to both multilaterals and non-governmental organizations leads to reductions in under-five child mortality rates but these results do not hold for aid to government. Our results are robust to three alternate measures of nutrition sensitive interventions and controls.

Discussion

Our findings suggest that in spite of criticisms that development assistance fails to adequately reach its intended beneficiaries, that DAH has been successful at reducing child mortality. Nutrition specific funding and funding to NGOs have been especially impactful. Future work can explore if these relationships vary by the strength of health systems and governance arrangements in different countries.
Determinants of health insurance enrolment in Ghana: evidence from three national households surveys

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Background

Since 2003 Ghana has been implementing a single National Health Insurance Scheme (NHIS) to move towards Universal Health Coverage. NHIS enrollment is mandatory for each Ghanaian citizen. However, its coverage rate is still very low (around 40%). Several studies attempted to assess the relation between socioeconomic characteristics and the probability of enrolling into the NHIS. Yet so far the evidence has been mixed and emerging mainly from studies conducted in a few geographical areas. In this study we investigate the socioeconomic determinants of enrollment into the Ghanaian NHIS using three recent national household surveys and accounting for the heterogeneity of the supply side.

Data and Methods

We used data of the latest Ghanaian Demographic and Health Survey (DHS) conducted in 2014, the Multiple Indicator Cluster Surveys (MICs) of 2011, and the 6th wave of the Ghana Living Standard Survey (GLSS) of 2012/13 to estimate the determinants of NHIS enrollment. These surveys are nationally representative and contain information on individual characteristics and NHIS enrollment. Given the multilevel nature of the three databases, we use multilevel logistic regression models to estimate the probability of being insured for women and men separately. We use three levels of analysis, namely geographical clusters, household and individual level. Robustness checks are conducted to validate results.

Results

In line with the existing literature, we find that education, wealth and, to some extent, age, are correlated with the choice of enrolling. Also marital status and the type of occupation are included in the analyses and show significant values. The probability of being enrolled in the NHIS, for both men and women, increases among those who used the health services. Furthermore, we find that the probability of enrolling is correlated with the type of occupation. Both women and men working in the agricultural sector and skilled manual workers are less likely to be enrolled in the NHIS than people who are not employed. These findings offer to policy makers some interesting topics of discussion.

Conclusion

The analyses of three national households’ surveys highlight the challenges of understanding the complex dynamics and factors behind the low NHIS enrollment rates. The results also indicate that subsidizing the worst off population groups might not be enough to encourage health insurance coverage.
Performance-based financing (PBF) in low- and middle-income countries: what is the theory of change, actually?

Co-authors: Elisabeth Paul-Université de Liège; Valéry Ridde-Institut de Recherche pour le Développement (IRD)

Purpose: Pay-for-performance is expanding in many health systems, both in high-income countries and in low- and middle-income countries (LMICs) where it is commonly known as "performance-based financing" (PBF). However, PBF results are mixed and it has been much criticised for its potential perverse effects. PBF schemes actually encompass different components (e.g. financial premiums, information systems strengthening, focus and feedback on key performance indicators, coaching, additional resources) and their designs may infinitely vary. Yet, PBF promoters fail to provide a clear and consistent explanation of why and how it is supposed to produce results in the first place. They also fail to explain why it is supposed to produce better results than alternative approaches. This communication aims to explore and better understand the "theory of change" (ToC) of PBF in the health sector in LMICs, and make the ideology it conveys more explicit.

Focus/ content: Our conceptual framework first disentangles the various elements of PBF, in order to identify the various mechanisms which are expected to produce results. We then perform a non-systematic review of various streams of the literature – both theoretical and empirical, including recent theory-based evaluations; the scope of the review is broadened to pay-for-performance in high-income countries – to identify the individual mechanisms and comprehensive theories that have been or could be used to justify the use of PBF. Disentangling the mechanisms associated with each PBF component enables to elicit the core ones that are strictly specific to PBF – that is, financial premiums conditioned on reaching a number of predetermined performance criteria, which are independently verified. The most common theory used to justify this, the principal-agent theory, does not hold in complex, real situations (multitasking, multiple principals, complex motivation); moreover, it conveys an implicit neoliberalist ideology that is never clearly stated. We conclude by arguing how alternatives to the PBF approach could be better suited to complex health systems.

Significance for the sub-theme area/field-building dimension of relevance: PBF is a very commonly promoted approach, despite conceptual fuzziness and lack of supporting arguments. This communication synthesises the theoretical and empirical literature to provide cutting-edge conceptual research in order to better understand PBF practice, and make the case for alternative approaches.

Target audience: Researchers, policymakers, and practitioners who are implementing or considering to implement a PBF scheme.
Phuong Hoang, Health Strategy and Policy Institute  
Poster Number: 125

**Examination of Multiple Funding Flows to Health Facilities – A case study from Vietnam**

Co-authors: Phuong Thi Hoang-Health Strategy and Policy Institute; Ayako Honda-University of Cape Town, South Africa; Kara Hansson-London School of Hygiene and Tropical Medicine (LSHTM), England; Oanh Thi Mai Tran-Health Strategy and Policy Institute

**Background**

Health systems for all rely on a sound health financing policy. Strategic purchasing is attracting increasing attention as it is recognized that how funds are spent is an important influence on health service coverage, equity, and financing. Where financing systems involve multiple purchasing mechanisms, it is important to understand how these together influence provider behavior and likely implications of multiple funding flows for overall financing system coherence, and for the health systems goals of equity, efficiency and quality.

**Method**

The study used a case study approach, collecting information from review of policy documents and published literature, secondary data analysis, in-depth interviews and focus group discussions with representatives of stakeholders at all levels. Data were collected in 2 provinces.

**Results**

Funding for hospitals in Vietnam comes from 3 basic sources: Health Insurance, state budget and user fees. Financing from health insurance accounts for the biggest share (60%), followed by the state budget and user fees, 20% each. Two different user fee systems operated: fees for uninsured patients and fees for 'on-demand' (private) services. Financing from different sources was found to play an important role in reducing the effect of financial constraints caused by inadequate funding from the state budget and in enabling investments to improve service quality and supplementing the income of hospital staff. However, the multiple funding flows led to shifting of resources within the hospital (higher quality services were provided for the on-demand services to attract patients, including insured patients); shifting of patients from the health insurance and hospital fees areas to on-demand clinics; or from outpatient to inpatient care, resulting in unnecessary admissions to attract higher hospital bed fees; and cost shifting to patients paying the on-demand fees. All of these behaviours contribute to inequity and inefficiency: increasing out-of-pocket costs, reducing financial protection from health insurance, and health insurance incurring unnecessary costs. These hospital behaviours arise from the level of payment, the provider payment mechanism, and different accountability structures for the different funding flows.

**Conclusion**

Multiple funding flows have increased financial resources for hospitals in Viet Nam. However, provider responses to these flows result in potential inequity and efficiency. Meeting health system goals will require reform of provider payment methods, costing of healthcare services and transparent accountability in order to prevent adverse provider responses to multiple funding flows.
Aligned mixes of provider payment methods for cohesive service delivery: What are the effects on expenditure growth management, efficiency and equity?

Co-authors: Isabelle Feldhaus-Harvard University; Inke Mathauer-World Health Organization

Background: Strategic purchasing of health care services has become a key policy measure on the path to achieving universal health coverage. Most countries' payment systems for health services are typically characterized by mixes of provider payment methods (e.g., some combination of fee-for-service payment, capitation, case-based payment, global budgets, and/or performance-based payment). Each method is associated with distinct incentives for provider behaviours. Reaching incentive alignment across methods is critical to enhancing the effectiveness of strategic purchasing. However, knowledge about how the interplay of diverse incentives affects health system goals is limited. This review synthesizes the existing evidence on how purposively aligned mixed payment systems affect health expenditure growth, efficiency, and equity in access to services. Methods: A structured literature review was conducted to identify the evidence on purposively aligned mixed provider payment systems. Articles focusing on effects of mixed payment systems, strategic purchasing, and/or aligned cost-sharing mechanisms on (i) managing health expenditure growth, (ii) efficiency, and (iii) equity were included. Given the focus on alignment of mechanisms across multiple providers or services, the search placed particular emphasis on chronic and/or integrated or coordinated care. Results: In total, 37 articles were included examining blended and bundled payment arrangements alongside cost-containment rewards and aligned cost sharing mechanisms. Blended payment models generally reported moderate to no substantive reductions in expenditure growth, but increases in efficiency. Bundled payment schemes consistently report increases in efficiency and corresponding cost savings. Additional cost-containment rewards generated cost savings that may contribute to management of health expenditure growth. However, ensuring equity was not a priority in existing studies, making it difficult to draw conclusions. There is also lacking evidence on where, when, and how payment systems and cost sharing practices align towards achieving health system goals. Also, publication bias may play a role in the predominantly positive results in the existing literature. Conclusions: A number of research gaps remain. The overwhelming majority of cases come from high-income settings. Well-designed experiments and robust analyses on where, when, and how mixed payment systems and cost sharing practices align towards achieving goals across purchasers, providers, and patients are markedly missing from the literature. A guiding framework to determine how to study and evaluate mixed payment systems in terms of managing health expenditure growth, increasing efficiency, and ensuring equity is warranted. Future research should consider a conceptual framework in which the complex nature of mixed provider payment systems is explicitly acknowledged.
A gender analysis of a national Community Health Workers program: a case study of Afghanistan

Co-authors: Said Ahmad Maisam Najafizada-Memorial University of Newfoundland; Ivy Lynn Bourgeault-University of Ottawa; Ronald Labonte-University of Ottawa

Gender equity can be a neglected issue in health system reforms. This paper explores the multiple layered gender dynamics of the Afghan Community Health Worker (CHW) Program within broader health system reforms in Afghanistan using a qualitative research design. We interviewed policy makers, health managers, CHWs and community members in 16 sites in 2013 and 2014. We found that gendered societal norms interact and influence the Afghan CHW program in a dynamic way. Gendered social norms around the division of labour tend to privilege women in terms of access to resources at the community level, but it is men who hold leadership positions that ultimately decide how the resources are to be distributed. The Afghan Ministry of Public Health expresses a commitment to gender equity, but policies on gender are restricted to reproductive health, thus constraining a gender-equity approach as focused on maternal and child health. Our explicit gender analysis not only reveals gender inequities in the Afghan CHW Program and the broader health system, it also uncovers how a highly gendered division of health labour provides some opportunities for women’s empowerment that can disrupt patriarchal role constraints and broader gender inequities.
Strengthening the community health system in Mozambique: a gender analysis of the Agentes Polivalentes Elementares programme

Co-authors: Rosalind Joanna Steege-Liverpool School of Tropical Medicine; Sozinho Ndima-Universidade Eduardo Mondlane; Miriam Taegtmeyer-Liverpool School of Tropical Medicine; Clara Ferrão-Universidade Eduardo Mondlane; Celso Give-Universidade Eduardo Mondlane; Mohsin Sidat-Universidade Eduardo Mondlane; Sally Theobald-Liverpool School of Tropical Medicine

Mozambique’s community health programme has a disproportionate number of male Agentes Polivalentes Elementares (APEs). One out of five trained APEs are female. There is concern that the preponderance of male APEs may deter women from seeking maternal and child care. To more adequately address maternal health issues within Mozambique, the government aim to increase the proportion of females to constitute 60% of this workforce. To help meet this goal, we set out to explore the reasons behind the gender imbalance.

We used qualitative methods to investigate how gender roles shape recruitment and attrition in order to build more gender responsive employment processes. We conducted thirty in-depth interviews and three focus group discussions in two districts to capture experiences and perceptions of purposefully selected participants, including APEs, APE supervisors and community leaders. Interviews were recorded, transcribed and translated. Iterative thematic analyses were used to synthesise findings.

Men and women report joining the APE programme for altruistic reasons. Although communities preferentially select female candidates, women may experience additional barriers, often requiring their husband’s consent as some husbands are reluctant for their wives to establish economic independence. A lack of spousal consent may also lead to intimate partner violence in some cases. Community leaders and APE coordinators were reported as being used as mediators. Training programmes outside of the community were viewed positively, as an opportunity to learn in a different environment. However, women reported difficulty leaving family responsibilities behind, these dynamics were particularly acute in the case of single mothers. Differences in attrition by gender were reported: women leave the programme when they marry, whereas men leave when offered a higher salary. Age and geographic location were also important intersecting factors: younger male and female APEs seek employment opportunities in neighbouring South Africa, whereas older APEs are more content to remain.

Gender analyses of human resources for health are rarely extended to the community level. This study highlights that gender norms and power dynamics intersect with other axes of inequity such as marital status, age and geographic location to impact recruitment and retention of the community health worker cadre. Health systems strengthening requires more equitable, responsive policies to support gender equity within APE recruitment processes and their responsiveness to the populations they serve. Gender transformative approaches at all levels – within household, communities and health systems, need to be implemented to promote more paid employment opportunities for women within the health workforce.
Creating systems for Gender-Based Violence prevention when there are none: participatory action research and community mobilization against violence in remote communities of the Peruvian Amazon

Co-authors: Geordan Shannon-UCL Institute for Global Health; Jenevieve Mannell-UCL Institute for Global Health; Nicole Minckas-UCL Institute for Global Health

In the Amazon basin of Peru, up to one in four women experience violence in their lifetime. However, remote river communities face often insurmountable barriers to systems of gender-based violence (GBV) prevention. Access to government services is severely limited or non-existent. Secondary or tertiary violence prevention is almost impossible due to geographic, economic, cultural and other systemic barriers. These challenges highlight the need for primary prevention strategies, and mean that systems for GBV prevention in remote communities of the Amazon need to be re-thought.

With these challenges in mind, a group of volunteer community health workers (promotores) from the Lower Napo River are developing a system of violence prevention for the community, by the community. Supported by DB Peru and University College London, the promotores are using a Participatory Action Research (PAR) approach to target GBV through community mobilization and education, titled “Gender-based violence prevention in the Amazon of Peru (GAP).”

PAR is a collaborative research style actively involving community member, research scientists, and practitioners, which aims to change a particular social reality on the basis of insights obtained by means of participatory research. The four widely recognized stages of this approach involve: reflecting, planning, acting and evaluating. Our team has included ‘engagement and ethics’ as a fifth phase in our approach. Using PAR, the GAP team have engaged in extensive community consultation, established a context-specific ethical framework for violence prevention, identified the root causes of GBV in their communities, designed appropriate, risk-factor specific interventions, mobilised a range of local resources, and connected to broader government programmes.

The GAP Project is the first primary preventative strategy for GBV in the Lower Napo River, and the first community mobilization project of its type in Peru. To our knowledge, it is also the first project to foster a PAR approach to violence prevention in a low-resource, isolated rural setting. Although the GAP project is located in Amazonian Peru, it has implications for other remote communities, and may be a powerful blueprint for community health workers around the world. Most importantly, the GAP project demonstrates the positive impact of community participation in developing systems for violence prevention where formal health systems are weak or under-developed.
Ashley Fox, University at Albany
Poster Number: 130

Why Zika wasn't enough to Liberalize Abortion Laws in Latin America: The Influence of Religion and Public Opinion

Co-authors: Ashley M Fox-University at Albany

Background: The recent Zika outbreak has brought renewed attention to Latin America's restrictive sexual and reproductive health laws. While Sustainable Development Goal 5 includes the goal of ensuring universal access to sexual and reproductive health and reproductive rights for all women and girls, the status of abortion remains a contested area. On the one hand, abortion is accepted by many international non-governmental organizations as both an evidence-based and rights-based means for women to have control over and decide freely on matters related to the timing and space of births. On the other hand, many governments continue to restrict access to abortion. A tacit assumption is that governments are working against the interests and preferences of their citizens in restricting access to abortion. But what happens when the normative assumptions advanced by transnational actors are in conflict with the values and opinions of the citizenry of countries where they work? This conflict came into sharp focus during the Zika outbreak when Latin American countries resisted appeals to liberalize their restrictive abortion laws even in the face of a public health emergency. Why do Latin American governments continue to resist international pressure to liberalize abortion laws?

Methods: This paper draws on data from two recent rounds of the AmericasBarometer public opinion surveys (2012 & 2014) that contain questions on attitudes towards abortion when the mother’s health is at risk and information on abortion restrictions in the region. This study assessed predictors of attitudes towards abortion including religiosity, gender and political orientation adjusting for income and other demographics. We analyze overall rates of support for restricting abortion even when a mother’s health is at risk and predictors of support for this attitude including religiosity, political affiliation and gender.

Results: We find that although most countries do allow abortion in this instance, a large portion of the populace, including women, is opposed to abortion even when the mothers health is at risk (&gt;50% in 7 countries; &gt;30% in all countries). Religion and religiosity explains some but not all of this attitude. Women and men were equally likely to oppose abortion in the case where a woman’s health is compromised.

Conclusions: We discuss the implications of the results for collective efforts to reform sexual and reproductive health policy in the region, particularly in light of the Zika threat, as well as implications for non-governmental actors working in the region.
Poster Abstracts

Vishali Sairam, Athena Infonomics India Private Limited
Poster Number: 131

Does Women Empowerment influence Decision-Making in Healthcare? A Case Study of Married Women in India

Co-authors: Vishali Sairam-Athena Infonomics India Private Limited; Sumirtha Gandhi-Indian Institute of Technology, Chennai; Umakant Dash-Indian Institute of Technology, Chennai

Context

In the last ten years, India has been at the forefront of policies targeting increased access to maternal and reproductive healthcare. However, multiple studies demonstrate that access to resources is often secondary to the ability to make decisions regarding usage of resources. This brings the concept of women empowerment, or the ability to make decisions for oneself, to the forefront of women’s health. This paper emphasizes the need to integrate the concept of empowerment to ensure increased healthcare access among women.

Objective and Methods

It seeks to fill the gap in current understanding of healthcare decision-making among Indian women by using Round 3 and 4 of National Family Health Survey data (2005-06 and 2014-15). It considers the effect of empowerment indicators over key socio-economic and demographic indicators and argues for interventions targeting social and economic development of women to increase health outcomes. In the process, it aims to identify vulnerabilities that impede women’s access to healthcare and suggest suitable modifications to ensure increased usage.

We use univariate and bivariate statistics for descriptive and preliminary analysis. Bivariate analysis using chi-square tests of association, are used to demonstrate significant associations between independent and outcome variables. Outcome variables in this analysis include decision making in own health and contraceptive decisions. Independent variables include indexes of empowerment across financial, household, mobility and domestic violence and control variables include key socio-economic and demographic characteristics. Multivariate Logistic models are fitted to understand the full and relative importance of empowerment indexes in determining key health outcomes among currently married women. In the process, a comparative analysis of change in women’s environment and healthcare decision-making across the two rounds of data is made.

Conclusions

Our results demonstrate the relative importance of empowerment indicators in determining health-seeking behavior for women. Specifically, decision-making on household factors is highly significant. Women who take decisions about household matters are 4.3 times more likely to take own healthcare decisions than those who do not. Additionally, decisions regarding contraceptive usage are highly influenced by socio economic factors. Women who access media regularly and women who have completed higher education are 1.7 and 2.07 times more likely to take contraceptive decisions than others.

This suggests that policies that focus on enhancing decision-making capability of women can increase positive health outcomes. This calls for tailored approaches which integrate the concept of social and economic development into healthcare policies targeting women.
Rooswanti Soeharno, UNICEF
Poster Number: 132

Identifying Determinant Factors to Strengthening Health System in Improving Maternal Health Outcomes and Equity towards Effective Universal Health Coverage in Indonesia

Co-authors: Rooswanti Soeharno-UNICEF

Women are particularly disadvantaged concerning formal social security coverage, including in Indonesia. It shows in the female labor force participation rate of 51% compared to 82% in men and employment rate of 48%: 79%. Moreover, women workers are more likely in the informal economy and unpaid work. It results in being less likely to be protected by social security systems, including in the national effort to achieve UHC through the national health insurance program (JKN). Nevertheless, they are more vulnerable to risks related to their life cycle and their role in the family.

In 2017, about 109 million of poor and near poor, equal to 62 percent of the total 177 million JKN participants are financed by state and local budgets. Even with the support of this social assistance, 20% of families have to borrow to pay for their normal delivery costs, mostly for non-medical costs. The utilization of this non-contributory participants is much lower than those from contributory memberships (less than 5% compared to about 25%).

Despite the decreasing level of catastrophic expenditures among the poor most likely to social health insurance, affordability is not the only barrier to utilization of maternal health services. The 2014 National Health Account (NHA) indicates that out-of-pocket spending remains about half of the total health expenditure. Health illiteracy and significant non-medical costs across regions and socio-economic groups limit the demand. Low access, utilization and outcomes of health by women is reflected by persistent high maternal mortality rate.

Low quality of services may be the reasons for stagnant outcomes. The economic and geographic disparity may be another reason for the relatively modest take-up and soaring inequality. Percentage of delivery at a health facility is 79%, with substantial disparities between richest and poorest quintile of 96% and 52% and between Maluku and Yogyakarta of 29% and 99%, respectively. The “three delays” of indirect causes of MMR shows the important socio-culture determinant factors in Indonesia, including decision making in access to health services in pregnancy and delivery.

The paper assessed effects of the JKN program on the utilization of maternal health care, as the preliminary of a larger investigation of determinant factors to boost outcomes and reduce inequity of health services. Multivariate analysis and qualitative analysis are used, and results show that identifying determinant factors, improving quality of integrated health services, and strengthening health system are essential to achieving the UHC targets.
Sustainable Development Girl's: Mapping Youth Advocacy & Action to Achieve Sexual & Reproductive Health Rights in Africa


Background:

Sustainable Development Goal (SDG 5): achieving gender equality and empowering women and girls, target 5.6 specifically forms the central pillar for attaining gender equality and sexual and reproductive Health Rights (SRHR). SDG 3: Health and well-being, target 3 - 7, universal access to sexual and reproductive health-care services, including family planning, information and education should be achieved, and reproductive health integrated into national strategies and programmes. Within the framework of leaving no one behind in SRHR, this research draws on arguments from the World Health Organization (WHO) and United Nations (UN) who recognise the importance of both youth and gender representation in the achievement of these intersectional goals drawing on young feminists' advocacy in Africa.

Methods

The SRHR Africa Trust (SAT) is a regional non-governmental organisation (NGO) which has established innovative youth hubs for 12-25 year-olds in Botswana, Malawi, Zambia, Zimbabwe and South Africa. Hubs provide safe and secure physical spaces as well as virtual online spaces for youth dialogue, networking, capacity building and collaboration. Six youth – young feminists (aged 16-27 years) who lead SRHR advocacy initiatives in the region were purposefully selected to participate in a virtual roundtable discussion and in-depth interviews to share their perspectives on global (SDGs), overlaps and interrogating SRHR policies and linkages to health systems. Thematic analysis of data was carried out.

Results and Discussion

The participants’ contributions revealed that there were some progressive shifts in discourse, for example, understandings of gender, during the discussion. Most participants saw the intersectionality between SDG 3 (health), 4(education) and 5 (gender) and were advocating for these issues at a number of levels – communities, national (policy) and globally. There were also noted weaknesses, such as limited knowledge and engagement of Pan-African discourse compared to their awareness of the SDGs and this also extended to the health system where few mentioned specific issues.

Conclusion

Young feminists stated that given present societal constraints, specifically cultural norms and lack of political representation, it is unlikely that the SDGs will be achieved. Youth feminism and agency in menstrual health and working with positive adolescents, demonstrated the potential to shift the adolescent and youth gender and SRHR terrain on to stronger activist ground but this is subject to further ongoing and meaningful engagement and inclusive health systems.

Keywords: Feminism, Sexual and Reproductive Health Rights, Gender, Advocacy, Africa
Male involvement in birth preparedness and complications readiness planning: Experience from the Maternal and Child Survival Program in Mozambique


Background

Mozambique’s maternal mortality ratio stands at 408 per 100,000 live births, one of the 20 highest in the world. The Ministry of Health (MOH) estimates that 54% of institutional maternal deaths are related to delays in deciding to seek care and the late arrival of women at health facilities. The World Health Organization (WHO) considers Birth Preparedness Planning and Complications Readiness (BPCR) an effective strategy to promote timely use of services, as it enables couples to prepare jointly for possible logistical challenges in the event of complications, and addresses gender inequalities that may inhibit access to care, including the decision to seek care.

Methods

In 2015, Jhpiego, leading the USAID Maternal and Child Survival Program (MCSP), and the Nampula and Sofala Provincial Health Directorates (DPSs) initiated interventions to integrate gender into reproductive, maternal, newborn, and child health (RMNCH) programs, including BPCR counseling. Baseline data were extracted from the national health information system for the period January-December 2014. These included male participation in antenatal care (ANC), the percentage of women attending at least four ANC consultations during pregnancy (ANC4), and the number of institutional births.

By December 2017, MCSP and the DPSs trained 1358 clinical providers and managers from 56 health facilities in Nampula and 30 in Sofala and their respective community health committee members on a gender integration approach on health promotion and service delivery, including couples counseling for BPCR, the importance of male engagement in ANC, and maternal health. BPCR planning has been implemented and monitored in the same 86 health facilities and their respective communities. Women have been given the option whether to involve their partners or not.

Results

Between the last quarter of 2014 and the last quarter of 2017, data show that male participation at the first ANC visit increased from 60% to 65% and ANC4 attendance increased from 37% to 50%. The number of institutional births also increased from 29,532 to 38,555 in the same time period.

Conclusion

Findings show that male involvement in BPCR has the potential to meaningfully engage men as a critical part of maternal health through couple-focused counseling to promote completeness of ANC service utilization and thus improve attendance of ANC4 and institutional delivery.
Gender-Sensitive Reproductive, Maternal, Newborn, Child and Adolescent Health Services in Tanzania: Where Do We Stand?

Co-authors: Mary Rwegasira-Jhpiego Tanzania; Lusekelo Njonge-Jhpiego Tanzania; Novatus Munaku-Jhpiego Tanzania; Tracy L. McClair-Jhpiego USA; Grace Mallya-Ministry of Health, Community Development, Gender, Elderly and Children, Tanzania

Interventions to reduce maternal mortality in Tanzania have focused on increasing facility deliveries without aiming to reduce inequitable gender norms that hinder timely utilization of reproductive, maternal, newborn, child, and adolescent health (RMNCAH) services, and addressing gender-related barriers within health facilities (HFs). The USAID Boresha Afya Project (UBAP) led by Jhpiego conducted a formative assessment to understand facilities’ practices relating to gender and respectful maternity care (RMC) in five project-supported regions in the Lake and Western Zones.

One hundred HFs in Mwanza, Simiyu, Shinyanga, Kigoma, and Geita were purposefully selected. Gender trainers collected data using Jhpiego’s Global Gender Service Delivery Standards Tool adapted for Tanzania. The standards tool measures availability and accessibility of services, male engagement, provider-client interaction (including RMC), and health care policies and facility management. Data relevant to each facility were collected through semi-structured interviews with 170 HF staff, participatory discussions with 270 HF staff, and direct observation.

Ninety-eight HFs participated (33 hospitals, 35 health centers, and 30 dispensaries). Ninety-five percent reported that clients and their companions were treated with respect (n=81). HFs with a separate room dedicated for confidential client counseling ranged from 57% of dispensaries (n=16) to 79% of hospitals (n=26). Observers indicated that patients were not left unattended by providers during antenatal care, labor and delivery, and postnatal care, ranging from 58% of hospitals (n=19) to 70% of health centers (n=21). Consent from a spouse, partner, or family member may be required for services, ranging from 58% of dispensaries (n=15) to 84% of hospitals (n=27). Client detention due to failure to pay was at 20% of HFs (n=20), and demanding gifts, favors, bribes, or sexual acts in exchange for services was found at 17% (n=17). A written client service charter with a policy on sexual harassment was available at 21% of HFs (n=20), and 8% indicated that staff were trained on gender in the past two years (n=8). By HSR2018, data from follow-up assessments will be available.

To address these critical gaps, the UBAP is holding participatory workshops with healthcare providers, engaging communities and facilities on community scorecards and developing a client-provider contract on rights, and working with the MoH on gender integration guidelines. Global health systems strengthening efforts and positive trends towards increasing facility births may be at risk if gender inequities persist. Other countries will benefit from applying a similar assessment approach to identify and subsequently address gender-related barriers to quality of care.
Poster Abstracts

Rosemary Morgan, Johns Hopkins Bloomberg School of Public Health
Poster Number: 136

Gendered health systems: Evidence from nine low- and middle-income country studies

Co-authors: Rosemary Morgan-Johns Hopkins Bloomberg School of Public Health; Richard Mangwi Ayiasi-Makerere University College of Health Sciences, Uganda; Debjani Barman-IIHMR University, India; Stephen Buzuzi-Biomedical Research and Training Institute, Zimbabwe; Charles Ssemugabo-Makerere University College of Health Science, Uganda; Nkoli Nwakigo E zumah-College of Medicine, University of Nigeria, Nigeria; Asha George-University of Western Cape, South Africa; Kate Hawkins-Pamoja Communications Ltd, United Kingdom; Xiaoning Hao-China National Health Development Research Center; Rebecca King-University of Leeds, United Kingdom; Tianyang Liu-China National Health Development Research Center; Sassy Molyneux-Kenya Medical Research Institute (KEMRI) - Wellcome Trust Research Programme; Kui Muraya-Kenya Medical Research Institute (KEMRI) - Wellcome Trust Research Programme; David Musoke-Makerere University College of Health Sciences, Uganda; Tumaini Mwita Nyamhanga-Muhimbili University of Health and Allied Sciences, Tanzania; Bandeth Ros-for ReBUILD Consortium and RinGs, Cambodia; Kassimu Tani-Ifakara Health Institute, Tanzania; Sally Theobald-Liverpool School of Tropical Medicine, United Kingdom; Sreytouch Vong-ReBUILD Consortium and RinGs, Cambodia; Linda Waldman-Institute of Development Studies, United Kingdom

Background: Gender is often neglected in the health systems, yet health systems are not gender neutral. Within health systems research, gender analysis seeks to understand how gender power relations create inequities in access to resources, the distribution of labour and roles, social norms and values, and decision-making. This presentation synthesizes findings from nine studies focusing on four health systems domains: human resources, service delivery, governance, and financing. It provides examples of how a gendered and/or intersectional approach can be applied by researchers in a range of low- and middle-income settings to issues across the health system and demonstrates that these types of analysis can uncover new and novel ways of viewing seemingly intractable problems. Methods: The research used a combination of mixed, quantitative, qualitative and participatory methods, demonstrating the applicability of diverse research methods for gender and intersectional analysis. Within each study, the researchers adapted and applied a variety of gender and intersectional tools to assist with data collection and analysis, including different gender frameworks. Some researchers used participatory tools such as photovoice and life histories, to prompt deeper and more personal reflections on gender norms from respondents. Others used conventional qualitative methods (in-depth interviews, focus group discussion). Results: Five core themes that cut across the different projects were identified: the intersection of gender with other social stratifiers; the importance of male involvement; the influence of gendered social norms on health system structures and processes; reliance on (often female) unpaid carers within the health system; and the role of gender within policy and practice. These themes will be expanded upon during the presentation and indicate the relevance of and need for gender analysis within health systems research. Conclusion: The implications of the diverse examples of gender and health systems research highlighted indicate that policymakers, health practitioners and others interested in enhancing health system research and delivery have solid grounds to advance their enquiry and that one-size-fits-all heath interventions that ignores gender and intersectionality dimensions require caution. It is essential that we build upon these insights in our efforts and commitment to move towards greater equity both locally and globally.
Doaa Oraby, Independent consultant  
Poster Number: 137

**Women Living with HIV in the Middle East North Africa Region: The Missed Opportunity for Mitigating the Epidemic**

Co-authors: Doaa Oraby-Independent consultant

**Background:** The Middle East and North Africa (MENA) region is currently witnessing feminization of the HIV epidemic. To mitigate the HIV epidemic in the low prevalence highly stigmatized MENA region, women need to be encouraged to access HIV preventive services and women living with HIV (WLHIV) need to be acknowledged and linked to a continuum of health care. Otherwise, a dramatic increase in the role women are currently playing in bridging the HIV infection to the general population will be witnessed.

**Methods:** The current study, marking the aftermath of the Arab Spring, aimed to safeguard the region against fulmination of the HIV epidemic. The study adopted focus group discussions with 170 HIV positive women in ten countries to gain insight into their perceptions and frustrations with health care. The discussions were facilitated by WLHIV.

**Results:** Being popularly associated with illicit practices, WLHI are more negatively influenced by stigma and discrimination than their male counterparts. The fact that a large fraction of HIV infections among women are being transmitted within a marital relationship is still not widely understood in MENA which resulted in the harsh attitude towards WLHIV from the health providers. WLHIV revealed facing denial of care, stigmatizing attitudes, discrimination and breaches of confidentiality, particularly among health professionals who are not specialized in HIV care, regardless of how serious their health status was. The painful endurance of WLHIV is not only limited to humiliation and denial of services among non HIV trained providers but extends to many HIV providers. Emphasis of health care providers is placed on use of the male condom which is the decision of husbands and they are unaware of the reproductive options available denying them the right to get pregnant or the suitable contraceptive methods that WLHIV can use.

**Conclusion:** WLHIV were forced to endure in silence their unmet health needs and pain after witnessing painful experiences and facing humiliation and denial of care and alternatively, some WLHIV conceal their HIV status to have their health needs attended to, both of which will fulminate the HIV epidemic. In a region with limited resources and weak health systems, global support is needed to develop a competent cadre of health care providers who have accurate HIV knowledge, non-stigmatizing attitude and are familiar with the reproductive health needs of WLHIV. Additionally, efforts should be devoted to combating HIV related stigma and empowering WLHIV.
Illness narratives as an innovative method to ensure no one is left behind in health systems development: disease, disability and intersectionality in Liberia

Co-authors: Laura Dean-Liverpool School of Tropical Medicine; Rachel Tolhurst-Liverpool School of Tropical Medicine; Gartee Nallo-University of Liberia, Pacific Institute for Research and Evaluation; Karsor Kollie-Ministry of Health, Liberia; Sally Theobald-Liverpool School of Tropical Medicine

Background: The priorities of people living with chronic disease and disability are often ‘left behind’ in health systems development. Illness narrative methods are unstructured interview approaches designed to allow individuals to lead and shape discussions about their illnesses in ways that make sense to them, moving beyond biomedical approaches to health. In this abstract, we critically appraise our experience of using illness narratives to enable an intersectional analysis of experiences of debilitating and disabling neglected tropical diseases (NTDs) in Liberia to support the development of person-centred health systems.

Methods: Twenty-eight illness narratives were collected as part of patient/family case studies, to understand the experience of individuals living with debilitating or disabling diseases in Liberia. To allow for deeper understandings of the links between disease and disability, thematic areas for exploration were shaped by domains identified in the international classification of functioning. This approach to data collection was designed to allow for intersectional analysis with a focus on the fluidity of the personal illness experience and how this is shaped by multiple individual positioning in the broader social, political, gendered and cultural context.

Findings: We examine the successes and challenges of this narrative approach in development of health systems and interrogate emerging ethical challenges. Strengths involved the development of detailed and nuanced accounts of disease experience that shaped ideas for multifaceted interventions. Participants frequently described this as novel (having never been asked about their experience before) and therapeutic. Challenges included: difficulty in encouraging participant monologue due to the unstructured nature of the method; barriers to securing confidential environments to conduct interviews based on many participants being dependents; identification of participants who are frequently ‘hidden’ within communities and under-acknowledged by the health system. Depth of detail within narrative accounts frequently revealed that participants were unaware of the diagnosis or degree of permanency of their condition and significant mental health challenges such as depression and suicidal ideation were described. This presented ethical dilemmas for the research team in ensuring appropriate care referral, particularly given the relative weakness of health system support in rural and marginalised study locations.

Conclusion: Illness narratives can be a strategic tool in unpacking the complexity of disease experience, particularly in contexts where individuals are highly stigmatised and marginalised. They present an opportunity for reflection by health systems actors on how to provide social protection for vulnerable and often isolated groups in a way that is responsive to their needs and experience.
Learning from health system governance in China: evolution, innovation and significance for health system strengthening

Co-authors: Beibei Yuan-Peking University China Center for Health Development Studies; Weiyan Jian-Peking University School of Public Health; Qingyue Meng-Peking University China Center for Health Development Studies; Melisa Martinez-Alvarez-London School of Hygiene & Tropical Medicine; Dina Balabanova-London School of Hygiene & Tropical Medicine

Background: Health system governance is critical to the country’s health system operation and its overall performance. In the last six decades China has made great advances in health system strengthening. While studies have examined the policy contents and their impacts, the role of governance in designing and implementing these schemes is not well understood.

Method: This study aimed to analyse the role of health system governance in pushing the health policy innovation and effective implementation by applying a retrospective review method to collect, analyse and synthesise information from publications and policy documents relevant to the overall health system governance in China and implementation process of two typical health policies, Mass Health Campaign and New Rural Cooperative Medical Scheme.

Results: By analysing from governance perspective, a number of common governance features underpinning two policies were found, no matter in the level of overall governance background or the specific governance practices, including highest authority prioritising health system development; the specific health policies being also prioritised within national development agenda; strong political will for promoting the policies drawing on the advantages of the highly hierarchical administrative system in China; and accumulating evidences generated from local experience to support policy making. It was also found that the formation of these governance practices and the mechanism of how these practices working on pushing the policy innovation and implementation, were both closed related to political and socio-economic development contexts in China.

Discussion and conclusions: Given that many LMICs are strengthening their health system to achieve the goal of universal health coverage, this study demonstrates that compared to drawing lessons from the contents of health policies or interventions, addressing factors in each governance domain are the critical for the adaptation of the policy design to other settings and the effective operation of policies in other settings.
Exploring Harmful Incidents in University Hospitals in Ghana: Implications for Patient Safety

Aaron Asibi Abuosi
Aaron Abuosi - University of Ghana; Gloria Ansa - University of Ghana Hospital

**Background**

The occurrence of harmful incidents, defined as any event causing harm to the patient that was perceived to be more related to the healthcare management rather than to the patient's underlying condition, has been recognized by the World Health Organization to be a substantial contributor to the global burden of disease. Majority of published studies to date, however, have been from developed countries, with less studies from developing or transitional economies. This study sought to explore the nature and extent of harmful incidents occurring in a University hospital in Ghana, by identifying their incidence, nature and preventability.

**Methods**

We reviewed records of in-patients retrospectively in two medical wards from January to December 2016. A total of 325 sample size was determined for the study. Systematic sampling was employed to select the electronic in-patient records. The records were screened by two nurses and reviewed by one physician. Data analysis was done with the aid of SPSS version 24.

**Results**

Causation of Harmful Incidents: Out of 325 records screened, 77, representing 24% were seen to have harmful incidents. The critical question, among others, relates to whether there are indications that health care management caused the injury? A little above 53% of the records reveal that health care management caused the harmful incidents. The main cause being delay in management implementation, accounting for 41% of harmful incidents. Therapeutic procedures account for 64% of harmful incidents. Factors influencing harmful incidents. The major system factors influencing harmful incidents include inadequate monitoring of patients (49%), failure to implement protocols or plans (31%) and delay in provision of services (21%).

Severity of Harmful Incidents: The major evidence of severity is prolonged ward stay of patients, which account for 92% of the harmful incidents. However, 9% of harmful incidents were associated with death. Preventability of harmful incidents. On a 6-point scale ranging from 1, virtually no evidence of preventability, to 6 definite certain evidence for preventability, 43% were definite certain for preventability of harmful incidents.

**Conclusion**

There is high incidence of harmful incidents in the University of Hospital. These are largely caused by health care management. The major effect is prolonged ward stay and death in some cases. However, these are largely preventable. The hospital management must therefore improve upon their management of in-patients, especially use of treatment protocols, prompt care and monitoring of patients.
Poster Abstracts

Erlyn Macarayan, Ariadne Labs
Poster Number: 141

Role of facility management in advancing PHC and achieving SDGs: Results of a multilevel model examining associations of facility management with technical and experiential outcomes

Co-authors: Erlyn Macarayan-Ariadne Labs and Harvard TH Chan School of Public Health; Hannah Ratcliffe-Ariadne Labs; Easmon Otupiri-Kwame Nkrumah University of Science and Technology; Lisa Hirschhorn-Feinberg School of Medicine, Northwestern University; Kate Miller-Ariadne Labs; Stu Lipsitz-Ariadne Labs; Asaf Bitton-Ariadne Labs

Background Primary health care (PHC) is the backbone of health systems and essential for achieving the Sustainable Development Goals. However, in many low- and middle-income countries (LMICs), PHC is of poor quality and unable to deliver on this potential. There is substantial evidence from high-income countries that better management of PHC facilities is associated with improved facility performance and better health outcomes, but evidence about what constitutes “good” management and how management translates to outcomes is limited in LMICs, where improvements in performance are acutely needed. We propose a framework for measuring management of PHC in LMICs and present results from a novel survey assessing management of PHC facilities in Ghana and associations between management quality and technical and experiential outcomes.

Methods Using novel survey data obtained through the Performance Monitoring and Accountability 2020 platform, we created an index to measure management performance in 142 PHC public and private facilities in every region of Ghana. We examined how performance varied across five management domains: 1) Target Setting, 2) Operations, 3) Human Resources, 4) Monitoring, and 5) Community Engagement. Using multilevel models, we examined associations between management and technical service delivery outcomes such as drug and supply availability and the experiences of 896 women who sought care at the sampled facilities.

Results The average overall management score was 0.76 on a scale of 0 (low) to 1 (high). Management performance was generally higher for the domains of Human Resources (0.89) and Monitoring (0.81) than Target Setting (0.74), Operations (0.73), or Community Engagement (0.65). Large disparities in performance were found across regions and facility types, with higher-level facilities performing better than lower-level facilities. Controlling for facility characteristics, facilities with the highest management scores had 51% more essential drugs compared to facilities with the lowest management scores (p<0.01). In multilevel models controlling for facility and demographic characteristics, women who sought care at facilities with the highest management scores had a 37% higher mean quality rating compared to women who sought care at facilities with the lowest management scores (p<0.05).

Conclusion. Our study quantified how better management of PHC facilities is associated with improved facility service delivery capacity and higher patient ratings of quality of care. In Ghana, large disparities in management performance exist across facility types and regions, indicating a need to strengthen management practices to realize the full potential of PHC in improving health outcomes and patient experience, and achieving the SDGs.
Poster Abstracts

Christine Tashobyta, Makerere School of Public Health
Poster Number: 142

Using theoretical and empirical analysis to inform proposals for adjustment of Uganda’s district health system performance assessment framework

Co-authors: Christine Kirunga Tashobyta -Makerere School of Public Health; Bart Criel - Institute of Tropical Medicine Antwerp; Freddie Ssengooba - Makerere School of Public Health

Background

Health System Performance Assessment (HSPA) is a complex and context specific endeavor. Like a number of other Low and Middle Income Countries (LMICs), Uganda has implemented national and subnational HSPA over the last 2 decades. The District League Table (DLT) has been implemented in Uganda since 2003. This paper presents an analysis of the performance of the DLT which is utilized to propose adjustments for effective Uganda District HSPA.

Methods

A multiphase case study was undertaken using mixed methods of research. Phase 1 involved the use of international literature, followed by an expert group. Phase 2 utilised the Uganda DLT as a case study, whereby historical analysis was used to document the evolution of the DLT, and hierarchical cluster analysis was utilised as a comparative form of statistical analysis to the composite index and ranking used by the DLT. Phase 3 was to propose a revised district HSPA framework on the basis of findings of phases 1 and 2.

Results

A normative HSPA framework consisting of seven attributes covering process, content and context was the output of Phase 1. Phase 2 provided a comprehensive critique of the DLT from several perspectives along the normative HSPA framework. Highlights included limited participation of stakeholders in development and implementation of the framework; and an assessment model that is currently out of sync with the Ugandan health system context, and whose outputs do not provide the necessary information to support decision making. Phase 3 produced proposals for adjusting the Uganda’s district HSPA framework. A more participatory process of development and implementation of the framework with emphasis on district managers was proposed. In regard to context, it was proposed that the framework should take into consideration the multiple determinants of health including health care and non-healthcare aspects, and acknowledge the decentralization policy and multiplicity of stakeholders in the district health system. The content of the framework it was proposed should provide for clarity of objectives (decision making vs accountability), appropriate indicators, availability of good quality data; and mechanisms through which statistical and other forms of analysis produce information to support decision making are developed and explicitly documented.

Conclusion

The study utilized international literature and experiences of the Uganda DLT to provide an analysis and inform proposals for adjustment. Other countries and organizations can utilize a similar approach to develop or adjust their HSPA frameworks.
Carrie Brooke-Sumner, Medical Research Council South Africa
Poster Number: 143

‘Doing more with less’ – perceptions of South African health service managers on implementation of health innovations

Co-authors: Carrie Brooke-Sumner-Medical Research Council South Africa; Petal Petersen-Williams-Medical Research Council South Africa; Bronwyn Myers-Medical Research Council South Africa

Background: Economic pressures on health expenditure and a quadruple burden of disease place escalating pressure on the South African health system. Implementing innovative evidence-based practices may address this burden. This study investigated the perceptions of health service managers on implementing innovations within the constraints of their current service delivery.

Methods: In-depth interviews were conducted with 21 primary health care facility managers and 8 district level managers in the Western Cape province. The framework analysis approach was employed for data analysis.

Results: Analysis revealed a dichotomy in the perceptions of managers. Some saw innovations as opportunities for creativity and ‘doing more with less’, with patient benefit the predominant motivator. Others seemed overwhelmed by increasing patient numbers and perceived flux in the health system. They view innovations that are introduced without necessary resources as increasing burden on existing staff. The top-down approach to communication around innovations was perceived as a barrier to implementation, since it offers little opportunity for staff to understand the rationale for an innovation. Lack of opportunities for team building to motivate staff to make changes was commonly reported. Facilitators of innovation adoption included staff dedication to patients, strengths and interests of individual staff, clear communication of benefits for patients and service providers, provider consultation before implementation, and continuous monitoring and feedback.

Discussion: These contrasting perceptions suggest a need to create a more supportive environment that enables managers to implement innovations. Refining the process by which innovations are introduced into facilities by for example incorporating facilitators identified in this study, and enabling managers to address identified barriers may be one approach. More participatory and inclusive planning around implementation of innovations is also indicated. It may be particularly important to communicate how an innovation will impact on frontline staff’s daily work, for example how improving chronic disease outcomes can result in fewer patient visits and reduced workload for frontline staff. This participatory process could also contribute towards the expressed need for teambuilding which would additionally support the overall functioning of facilities.

Conclusion: ‘Doing more with less’ is likely to be a health system imperative for implementation of health services in South Africa in coming years. Data from this study suggest potential strategies for operationalising this approach in the primary care context by supporting health service managers as gatekeepers to innovation adoption.
Isaac Ddumba, Mukono District Local Government
Poster Number: 144

Citizens’ outcry, a trigger to public health institutions responsiveness; Exploring the role of accountability mechanism on local health systems performance in Uganda.

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Background:
Health systems governance is recognized as a vital element in achieving resilient and functional health care systems as well as a panacea for Universal Health Coverage (UHC). Accountability mechanism ranks high on the global agenda especially in developing countries with fragile health systems. These mechanisms offer a platform to respond to feedback at various levels of service delivery; within the different levels of health system (bureaucratic) or community (external accountability). This notwithstanding, existing oversight and accountability structures have not produced the desired results. In many instances, they have stopped at providing a voice with no power to influence implementation of desired innovations amidst understudied causes of suboptimal functionality. This study aimed to explore the roles of accountability mechanisms and how they affect performance of the local health system (LHS) in Uganda.

Methods:
This was a single embedded case study design. Twenty four key informant interviews were conducted with political leaders, advocacy groups and district health team officials. In addition, 4 focused group discussion (FGDs) were conducted with residents in Mukono district. Analysis was undertaken following the thematic network analysis framework. This process was aided by the atlas.ti7 software for qualitative data analysis.

Results:
Four themes emerged from this study: (1) Resource rationalization, (2) performance monitoring, (3) participatory planning and (4) bureaucratic reporting. Most participants revealed that, amidst merger resource allocation for health, accountability mechanism aid in rational allocation of resources, grants opportunities for community members’ participation in planning, resource allocations and provide a check at different points of service delivery. Some participants highlighted existing formal reporting structures such as; community score cards and Barraza act as good platforms for evaluation of institutional performances. However, reporting was largely driven by formal set targets per different indices within LHS and its achievement majorly depended on the organizational culture.

Conclusion:
Accountability mechanisms provides opportunities for strengthening the performance of LHS in low income countries. Additionally, existing strategies such as community score cards should be incorporated as part of the accountability tools in order to harmonize the gaps between bureaucratic and community accountability mechanisms.
Canadian living in Ontario without private insurance have more unmet health care needs than ten years ago: evidence from the Canadian Community Health Survey

Co-authors: Hinda Ruton-University of British Columbia; Ashra Kolhatkar-University of British Columbia; Michael Robert Law-University of British Columbia

While Canada has universal coverage for hospital and physician services, prescription drugs are not universally covered. Consequently, Canada has comparatively high rates of cost-related nonadherence to prescription drugs. This study investigated the relationship between prescription drug coverage and overall unmet health care needs in Ontario and its evolution over time.

We analyzed data from the 2005 and 2014 Canadian Community Health Survey (CCHS) using logistic regression to investigate the relationship between self-reported prescription drug coverage and unmet health care needs. Our sample included 32,564 and 18,434 respondents for 2005 and 2014, respectively.

After adjusted for age, gender, marital status, household income, and self-reported health status, Ontario residents without prescription drug coverage had an increased odds (2005: OR=1.26, 95% 1.11, 1.43) and (2014: OR=1.31, 95%CI 1.04, 1.63) of unmet health care needs compared to those with prescription drug coverage. After restricting the definition of unmet health care needs to those who cited cost and decision not to seek care as reason for unmet health care needs, we found that the adjusted odds of unmet health care needs were accentuated between 2005 (OR=1.86, 95% 1.44, 2.40) and 2014 (OR=2.70, 95%CI 1.04, 1.63) among those without prescription drug coverage compared to those with prescription drug coverage.

This study provides evidence of a link between prescription drug coverage and unmet health care needs. The findings also suggest that, despite numerous benefit and price regulations changes in the pharmaceutical sector, the state of unmet health care needs for Canadian without prescription drug coverage appears to have worsened over time. Improving the availability of prescription drug coverage should be considered as a strategy to improve health equity and access to care.

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Background: While the interlinkages between environmental factors and health are being increasingly well evidenced, the research on public health challenges in tropical delta regions is limited. This study aims to examine the disparities in the prevalence of catastrophic health expenditure (CHE) and impoverishment due to out-of-pocket (OOP) health expenditure in the Mekong delta in comparison with other regions in Vietnam. It also intends to investigate the associations between economic and environmental shocks, CHE and the impoverishment due to healthcare payments.

Methods: Using data from the Vietnam Household Living Standards Survey 2012, the prevalence of CHE was estimated from the fraction of healthcare costs in relation to household consumption expenditure. The poverty headcount was estimated using the total household consumption expenditure and such expenditure without OOP payments for health in comparison with national poverty-line. Simple and multiple logistic regression models were used to examine the associations between geographic, health systems, environmental and demographic variables and CHE, and impoverishment, due to health expenditure, respectively.

Results: Both the level of household health expenditure and the proportion of households suffering from impoverishment due to OOP were higher in the Mekong delta region compared to other regions. While the results from the multiple regression analysis showed that households in the Mekong delta region were significantly less likely to suffer from CHE, they were significantly more likely to be impoverished due to OOP healthcare expenditure. While health insurance membership did not have a significant effect on either outcomes, households that observed an economic or an environmental shock in past 5 years were considerably more likely to suffer from CHE and impoverishment due to OOP healthcare payments.

Conclusions: The findings suggest that the financial protection capacity of health insurance schemes in Vietnam should be improved and expanded to reduce impoverishment as the result of OOP healthcare payments, particularly in the Mekong region. Additional investments in disaster preparedness strategies can further help to reduce the financial burden of households in this environmentally vulnerable area.
Strengthening health system responsiveness to community and citizen feedback in LMICs: a systematic review of the conceptual and evaluative terrain

Background: Responsiveness to citizen rights, needs, and expectations is understood to be an essential quality of health systems (HS), an intrinsic goal and priority for HS, alongside service outcomes and equity. The term is commonly used both as an indicator of HS performance and colloquially as a value and social good. Responsiveness is necessary to provide inclusive, legitimate and accountable services, however citizens in LMICs experience a range of problems with weak and poorly responsive HS. Despite numerous movements for increased participation in health, communities in LMICs frequently do not have adequate opportunities to evoke appropriate responses. Access to feedback channels and the ability to leverage response to feedback is often inequitable.

Methods: A scoping review was conducted to conceptually map ‘health system responsiveness’ (2017), followed by a more systematized review of empirical research on HS responsiveness in LMICs (completed early 2018). This review work forms the foundational phase of a larger empirical study ‘Strengthening health system responsiveness to citizen feedback in Kenya and South Africa’ (2018-2021), funded by the MRC JHPSR.

Results: The conceptual mapping shows conflicting and siloed literature on HS responsiveness and equity; devolution of decision-making; accountability, public participation, and patient satisfaction. Small clusters of studies focus on the WHO framing of responsiveness, and on specific mechanisms. The concept of responsiveness is inadequately developed, and approaches to measuring responsiveness are limited and often contradictory. A too-tight focus on patient-perspectives (usually assessed immediately at a particular point of service), does not allow for the complexity of HS responsiveness, nor its effects on community and population health over time. Review of empirical papers shows an over-emphasis on short-term and descriptive (non-evaluative) research on traditional facility-based responsiveness mechanisms (eg complaints boxes, exit surveys, score cards); which is rarely integrated with community-level citizen feedback (eg clinic committees, health forums, community monitoring); and almost no mention of non-traditional feedback (eg social media, social protest).

Conclusion: There is urgent empirical and conceptual work to be done on HS responsiveness in LMICs. Empirical research needs to look ‘further’ (beyond feedback reception to HS reaction), and ‘wider’ (the ability/ inability of an HS to respond to multiple forms of feedback). Conceptually, ‘responsiveness’ needs further development, and we suggest there is value in distinguishing between ‘health service responsiveness’ (as focused on responding to the articulation of patient need), and ‘health system responsiveness’ (inclusive of all people in the HS, and looking at responsiveness of the whole system).
Leveraging cash transfers for universal health coverage among children affected and infected with HIV: An evaluation study from South India.

Co-authors: Edwin Sam Asirvatham-Christian Medical Association of India; Bimal Charles-Christian Medical Association of India

Background

Children affected and infected with HIV in India are primarily from the poor and disadvantaged households. They are deprived of health care and the determinants such as nutrition, shelter, and education. In order to respond to this situation, a cash transfer program was implemented to address the education, nutrition, medical and socioeconomic needs of the children infected and affected by HIV in the state of Tamil Nadu. This was operationalized through an Orphan and Vulnerable Children (OVC) Trust with a corpus fund of $1 million. The objective of the study was to assess the effectiveness of the cash transfer program in achieving its intended objectives.

Methods

The study was carried out in 10 districts that were selected from four clusters of districts in the state. Out of the 655 beneficiaries, a sample of 153 beneficiaries was selected using probability proportional to size method from each district. Interviews were conducted using a semi-structured interview schedule. The caretakers were interviewed for children below 15 years. Biometric markers (hemoglobin and CD4) of children on ART were collected from medical records. The available data before the cash transfer programme and latest available data during the study were taken for comparison.

Results

Around 73% of the children were HIV-infected and the remaining were affected. Around 37% were double orphans, 53% and 10% were paternal and maternal orphans respectively. Around 30% were under the care of grandparents. The average age of the caregivers was 44 years (20-85 years). For 89% of the respondents, food expenditure was the primary household expenditure. The household income was positively correlated with food consumption ($r=0.607; p<0.001$) indicating less scope for other basic needs. The program disbursed an average amount of INR 2,617 (USD:40). The majority of the beneficiaries reported improvement in school attendance (98%) and performance in school (94%). Around 42% reported an improvement in the food consumption pattern. Around 73% reported that the support enhanced their health-seeking behavior and health status. Among children on ART (81), both mean hemoglobin level (10.04 to 10.76 mg; $p<0.001$) and mean CD4 level (738.75 to 1014.34; $p<0.01$) increased significantly.

Conclusion

It is evident that the cash transfer program has contributed to restoring the childhood, improved their education and health status. However, the program reached out only a low proportion of eligible beneficiaries. It is imperative to scale up the program to all the poor and vulnerable children infected and affected by HIV through appropriate resource mobilization initiatives.
User fee exemption as governmentality: perspectives from Senegal

Co-authors: Philipa Mladovsky-London School of Economics and Political Science; Maymouna Ba-Center for Research on Social Policies (CREPOS), Dakar

Background
Plan SéSAME (PS) is a user fee exemption policy to provide free access to health services to Senegalese citizens aged 60 and over. However, PS has suffered from insufficient funding and many health service providers have ceased implementation. Furthermore, there is inequity in access to the limited PS funds. The purpose of this study is to understand why implementation has been poor and to explore possible solutions to the problems identified.

Methods
34 semi-structured interviews and 19 focus group discussions with people aged 60 and over were conducted in four regions in Senegal during 2012. Additionally, 54 interviews with stakeholders (e.g. in ministries, health structures, international organizations, professional associations) were conducted. The study is inductive, allowing theory to emerge from the data.

Results
We identified 15 explanations for poor PS implementation across the three qualitative datasets. We grouped the explanations into eight themes: poor policy design; lack of government capacity; excessive demand for and supply of health services; inadequate demand for health services; misappropriation of PS funds; patronage; PS as a favour to a friend or family member; and poor quality of care. The following solutions to these problems were proposed by the interviewees: a grassroots approach to information dissemination; development of a universal state funded health insurance scheme; encouraging doctors to be more courageous in turning away patients who did not follow the referral process; encouraging increased morality among wealthier pensioners to discourage their use of PS; cash transfers for poorer older people; means testing and PS membership cards linked to electronic patient records to prevent wealthier, formal sector pensioners from accessing PS; funding for transportation of civil servants to monitor and supervise implementation of PS; engaging community volunteers to monitor fraud in PS; a more decentralised administrative structure; and a financial audit of PS to uncover fraud.

Discussion
We interpret these explanations as attributing PS policy failure to a lack of governmentality. Governmentality is characterized as the “conduct of conduct”, encompassing all deliberate endeavors to shape, guide and direct the conduct of others. The proposed solutions to PS’s flaws can be seen as disciplinary technologies and other forms of biopower.

Conclusion
Implementing universal health coverage (UHC) is not only a technical, financial or political endeavour; it also represents and shapes notions of morality, freedom, authority, self-discipline, geographic space, time and truth. These social and psychological transformations are currently poorly understood in the international UHC literature.
Exemption schemes for vulnerable households as a strategy to reach universal coverage in Benin and Senegal: a comparative analysis of implementation and logics of (non-)use

Co-authors: Céline Deville-Université de Liège; Marc Poncelet-Université de Liège; Fabienne Fecher-Université de Liège

Background: As countries tend to reach the objective of Universal Health Coverage (UHC), specific attention must be paid to the vulnerable households and the worst-off. This can be done in several ways. For instance, Benin exempted the poorest people from payment at point of service in several health districts supported by the World Bank, while Senegal enrolled and fully subsidized vulnerable households in community-based health insurance schemes. While the design differs, both strategies result in free public healthcare services for the beneficiaries. This contribution analyzes the implementation processes and results of these strategies in terms of services utilization.

Methods: Our analytical framework adapts Warin’s “non-use types” (2012) to the context of healthcare exemption schemes in West Africa. We collected data through 9 to 10 weeks of field research in each country and gathered information at the national and the operational level, in the district of Lokossa-Athiémé (Benin) and the department of Kaolack (Senegal). We conducted semi-structural interviews with different stakeholders, including 8 beneficiaries in Benin and 18 in Senegal, to understand the functioning of the strategies and the logics of service utilization. Interviews were fully transcribed and coded with Nvivo 11. We also collected and analyzed administrative data to estimate service utilization by beneficiaries. Results: The 3 types of non-use - defined by Warin as “non-receipt”, “non-information” and “non-request” - were found in both countries, and related either to the exemption scheme or to the healthcare services themselves. However, we found that the beneficiaries’ use of exempted services was up to 10 times higher in Senegal than Benin. This is partly explained by implementation issues, leading to “non-receipt” situations, that were more prevalent in Benin than in Senegal. Insufficient information and required administrative procedures prevented some beneficiaries from using exempted services in both countries. Finally, “non-request” behaviors were explained by different reasons, including persisting geographical or financial barriers, fear of stigmatization, as well as the perception of the quality of services and the seriousness of illness.

Conclusions: Our results indicate that administrative data underestimate the real utilization of healthcare services by beneficiaries. We also point out that people’s choice (not) to use exempted healthcare services are carefully thought through. Our research finally refutes the misconception about free healthcare leading to overconsumption, and identifies persisting barriers that prevent vulnerable household from using services according to their needs. These should be tackled in the hope of reaching UHC.
Project Izizi: “This is Ours”  

Implementing innovative research methods to better understand the contraceptive needs, preferences and behaviors of adolescents: Experiences of Malawian adolescent researchers

Co-authors: Katie Reynolds-VillageReach; Alinafe Kasiya-VillageReach; Lucky Gondwe-VillageReach; Fannie Kachale-Malawi Ministry of Health, Department of Reproductive Health; Barbara Singer-VillageReach; Bvudzai Magadzire-VillageReach; Beauty Waekha-VillageReach; Jessica Crawford-VillageReach

The purpose of the Project Izizi study was to generate evidence on adolescent contraceptive preferences in Malawi by supporting Adolescent Researchers to conduct the data collection with innovative research methodologies. Unmet need for family planning presents a particular challenge for adolescents in low income countries, whose specific developmental needs and vulnerabilities increase the likelihood of unplanned and complicated pregnancies, ultimately limiting their educational and socioeconomic advancement and increasing their risk of adverse health outcomes. While surveys have captured main barriers to contraceptive use among adolescents, the field lacks rich, context-specific qualitative data to inform design of contraceptive methods to better meet adolescent needs. We hypothesized that a peer approach to data collection using youth-friendly methodologies (social media, theater, and human-centered design) would produce richer nuanced data than with standard research approaches.

Adolescent researchers were recruited and trained to support qualitative data collection and analysis using innovative research methods designed specifically to elicit feedback from their peers. Data collection occurred in four phases over 12 months, with each phase building on the data collected during the prior phase. Adolescent Researchers first designed a survey instrument on contraceptive use and barriers and surveyed 100 Malawian adolescents who called a confidential health hotline and opted in to participate. Findings from the survey informed Adolescent Researchers as they led 24 theater-based focus groups, where the data collection process included participants creating and performing dramas based on scenarios about contraceptive use. Additionally, live digital focus group discussions through the WhatsApp messaging platform were moderated by Adolescent Researchers during which adolescents were prompted with scenarios and asked follow-up questions based on their anonymous participation in the live message thread. A final prototype development phase, facilitated by the Adolescent Researchers employing human centered design principles, allowed adolescents to engage as creators and innovators of modern contraceptives.

We will present on each of the innovative research methodologies and the lessons learned in response to using these methods for data collection with adolescents on a sensitive health topic. We will also discuss variations in methodology acceptance across the adolescent populations studied (urban/rural, marital status, gender). Finally we will share experiences of the Adolescent Researchers as collectors of sensitive health data among their peer group, and explore how youth researchers can be engaged and supported to participate in studies of this nature.
**Adolescents, Money and Family Planning: The Story from Bungoma, Kenya**

Co-authors: Stephen Yambi-Options (Kenya); George Ogola-Options (Kenya); Patricia Doherty-Options Consultancy Services UK; Olivia Tulloch-Options Consultancy Services UK; Rachel Cullen-Marie Stopes International

**Purpose:**

Commentary on the Demographic Dividend emphasises the economic return that will come from investing in adolescents, with sub-Saharan Africa predicted US$500 billion dividend every year for up to 30 years. But decisions about what adolescents need cannot be left with older generations of bureaucrats alone. Evidence for Action-MamaYe (E4A) believes that the transformation of adolescent health needs to be led by the young people affected so their needs and concerns are not left behind. How do we do this?

**Focus / Content:**

In Bungoma Kenya, E4A is supporting youth-led civil society to get involved in discussions about their health needs, including family planning, and the money and resources needed to ensure that promises are translated into reality. We do this by:

1. Providing long-term opportunities for adolescents to engage in discussions around health needs and finances with County Health Management Teams (CHMT).
2. Developing programme-based budgets with CHMT in which adolescent needs around family planning are allocated appropriate funding.
3. Equipping youth with relevant data on family planning so they know and use evidence on family planning with budgets.
4. Using scorecards to demonstrate how the health system is delivering against local health priorities to understand and whether duty bearers are fulfilling their commitments to improving young people’s health.

**Significance for the sub-theme:**

Adolescents holding decision makers to account for committing resources to family planning is critical to ensuring health services work for all and that young people are not left behind. It is also critical if countries are to achieve their commitments under SDG 3 (health and well-being) and 5 (gender equality).

The platforms and mechanisms used by E4A to share and translate knowledge amongst adolescents and county officials have proven successful and brokered better more equitable relationships:

"Initially as a department [we] were not allowed to share budget information with anyone not from the department, especially CSOs. …By working together with youths from CSOs, through programme based budgeting and Health Sector Working Group, we have come to appreciate their value in championing for more resource allocation and guarding the resource envelop“ County Director of Health

**Target Audience:**

This animated video (mamaye.org/issues/adolescent-health) neatly summarises why involving adolescents in health planning is important and the E4A approaches are relevant to anyone wanting to harness the Demographic Dividend and ensure that adolescents are at the forefront of the discussions around how to do this.
Learning about the lived experiences and realities of FSWs in the context of HIV self-testing: lessons from using photovoice in peri-urban Malawi

Co-authors: Wezzie Stephanie Lora-Malawi Liverpool Wellcome Trust-Clinical Research Programme; Rachel Tolhurst-Liverpool School of Tropical Medicine; Angela Obasi-Liverpool School of Tropical Medicine; Nicola Desmond-Malawi Liverpool Wellcome Trust-Clinical Research Programme; Eleanor MacPherson-Liverpool School of Tropical Medicine

Background: Globally, female sex workers (FSWs) are amongst the high-risk groups for HIV. In Malawi, HIV prevalence amongst FSWs is estimated at 25% which is higher than in women of the general population (12.9%). FSWs engagement in HIV/AIDS research is desirable to achieve the ambitious 90-90-90 goal. Photovoice is a methodology with the potential to enable participants to reflect on their community’s political and social realities and priorities to stimulate dialogue on these with service providers. However, this approach is rarely used with FSWs. We report on the process of investigating experiences and realities of FSWs in the context of HIV self-testing (HIVST) to understand their vulnerabilities and opportunities for empowerment in Malawi.

Methods: Eight FSWs (22-32 years old) who were either home-, bar-, or street-based and participated in the HIVST intervention from Peri-urban Blantyre, Malawi were engaged in Photovoice. Participants attended a one day workshop to train on how to conduct Photovoice in their respective communities. Participants took photographs for a period of five days to document their daily life experiences. Researchers followed-up each participant daily to conduct photo elicitation (reflecting on the meaning of the photographs) and give support in the process. Each participant and researchers selected some photographs to be analysed thematically in a group session.

Results: Frequent follow-ups were important for developing trust, a process that enabled FSWs to be ‘co-researchers’ in the generation of knowledge and minimise the risk of taking photographs in ‘risky’ places. The flexibility of Photovoice allowed participants to document aspects of their lives that could otherwise not be captured in traditional interviews. Photographs became a stimulus to invoke FSW’s own feelings about their experiences and enabled researchers to understand FSWs’ vulnerabilities better. However, there was limited participation in the individual photo elicitation by some FSWs who were under the influence of alcohol on some days. Four themes, including HIV/AIDS, emerged during the critical dialogue.

Conclusions: The visual medium and collaborative nature of Photovoice allowed us to broaden our scope of engagement with sex workers and deepen understanding of their lived experience. Feedback from Photovoice method can be used in the performance of health systems and designing interventions for FSWs by using FSW’s perceptive rather than from any ideological position.
Financing health systems that leave no-one behind: a survey of models from 20 nations and their provision for marginalised population groups

Co-authors: Thilagawathi Abi Deivanayagam-Newcastle University; Richard William Walker-Northumbria Healthcare NHS Foundation Trust; William Keith Gray-Northumbria Healthcare NHS Foundation Trust

Background

Universal health coverage (UHC) and the ethos of leaving no one behind are key principles for strengthening health systems in the sustainable development goal (SDG) era with increased focus on marginalised groups in all countries. Currently, equitable health financing is commonly evaluated by assessing the reduction of impoverishing and catastrophic health expenditure (CHE) within a nation. However, there are no studies assessing the relationship between health financing models i.e. revenue collection, and healthcare provision for marginalised groups through a publicly funded system or targeted policies or programmes. We evaluate 20 different health system models, examining revenue collection design and provision for the most vulnerable, with a view to comment on equity.

Methods

Twenty nations were selected by three researchers using a combination of systematic and stratified sampling. Each WHO region and the three main types of health system models (tax, social health insurance and private) were represented. Drawn from the work of Wagstaff et al. (2018) on financial protection, eight indicators used to assess progress towards UHC including population, gross domestic product (GDP), life expectancy, total health expenditure (THE) and CHE were obtained. Next, revenue contributions towards THE were analysed. Finally, seven marginalised population groups were selected for study drawing from the work of Backman et al. (2008) on health systems and the right to health: over 65s, under 5s, migrants, refugees, lesbian, gay, bisexual and transgender people, homeless people and people with learning disabilities. Provision for these groups was evaluated for coverage through the publicly-funded health system and existence of specific policies or programmes targeting these sub-groups.

Results

Data on the eight main health system indicators and methods of revenue collection have been obtained. Studying the extent of provision for marginalised groups is in progress. Once complete, our study will provide new evidence showing correlations between the dominant method of health financing and healthcare provision for vulnerable populations.

Discussion and conclusions

Lack of random sampling and a small sample size are considered as limitations. Overall, we expect models with a large proportion of THE from public financing to have better coverage for marginalised groups. However, new evidence relating health system models to equity of healthcare provision by studying the extent to which there is coverage for marginalised groups will be presented. Such data are vital to inform healthcare decision making as health systems develop and adapt as economies develop and disease burden changes.
Equity, social inclusion and human rights: improving recovery outcomes in burns survivors, India

Co-authors: Jagnoor Jagnoor-The George Institute for Global Health, India; Shobha Chamania-Choithram Hospital and Research Centre, Gandhi Medical College, Bhopal, India; Sheree Bekker-Australian Centre for Research into Injury in Sport and its Prevention, Federation University, Ballarat, Australia; Tom Potokar-Centre for Global Burn Injury Policy & Research, Swansea University, UK; Rebecca Ivers-The George Institute for Global Health, UNSW, Australia

Background: India has one of the largest burdens of burns with an estimated 7 million burn injuries per year, a mortality rate of 8.3/100,000 population, disfigurement and permanent disability in 250,000 people annually, and 5 million disability-adjusted life years. The ratio of fire-related deaths of young (15-34 years) women to young men is 3:1. The high risk of burn injuries among women arises from increased exposure through use of kerosene during cooking, suicides, and homicides associated with domestic violence. With socio-economic vulnerabilities, men in India are disproportionately affected by industrial burns. Limited literature suggests poor industrial legislation, a vast informal industrial sector with no labour rights, poor access to treatment, and no disability compensation as known risk factors contributing to poor recovery outcomes among men. The aim of this study was to explore the capacity of the Indian health system to provide adequate treatment and rehabilitation services for burns survivors.

Methods: We conducted a participatory action qualitative study including two rounds of in-depth interviews (n=23) with stakeholders working in burns care in Indian hospitals, health system managers, and burns survivors.

Results: Three key health system gaps to the delivery of adequate care for burns survivors were: 1) Inadequately skilled and poorly motivated workforce with high attrition rates in burns units, compounded by the absence of evidence-based guidelines. 2) Financial and physical barriers for patients to access services given the limited availability of burns units that face shortage of resources and supplies 3) Social exclusion of burns patients within the health system. Stigma associated with burn injuries and disfigurement was a challenge within the healthcare system, and at the community level. Burns survivors were also financially distressed, vocationally challenged and socially excluded.

Conclusion: Exposure to burns injury, subsequent access to health care, social inclusion and recovery are influenced by social determinants of health. The absence of coordinated efforts within the health care system to manage and treat burn injuries has led to very poor outcomes and quality of life for burn survivors. Establishing multidisciplinary care and community-based rehabilitation programmes integrated into the health care system are potential solutions to overcome these challenges. Recent inception of the National Program for Prevention and Management of Burns Injuries in India provides an opportunity develop solutions using a health systems (multi-sectoral) approach for improving recovery outcomes.
From youth-friendly health care services to youth-friendly health care systems: what can we learn from Zambia and Sweden?

Co-authors: Chama Mulubwa-The University of Zambia, School of Public Health; Isabel Goicolea-Umeå University, Sweden

Background

Despite some successful experiences, the concept of youth-friendly services has been criticized for focusing on individual providers and teams, disregarding that in order to fulfill the various and evolving health needs of young people the entire health system should be involved. The concept of youth-friendly health systems (YFHS) aims to address this gap, looking not only at individual and team level attitudes and resources, but also at issues related with integration, collaboration, sustainability and participation. Using the case study of Sweden and Zambia, this paper discusses lessons learnt on the challenges and opportunities to implement YFHS.

Methods

In Sweden, the case is the network of youth centers, which operate in the country since the 70's focusing on young people’s health needs with an holistic approach and are well established within the health system. In Zambia, the case is the integration of health care services for young people within the existing community-based health systems. Using qualitative information collected in our ongoing projects in Zambia and Sweden, we identified opportunities and challenges to develop YFHS.

Results

In Sweden, the sustainability of the model of youth centers is grounded in an enabling environment and the commitment of those working in the centers. The role of the national association of the youth centers, a non-governmental group integrated by professionals working in the 250 existing centers has been key. The existence of this association has ensured a common mission, certain independence from the “rest” of the health system and sustainability. In Zambia, making community-based health systems youth-friendly seems as a good way to ensure young people’s access to health information and services, but ageism hinders communication between young people and community health workers, especially in topics related with sexuality. Challenges in both settings relate to: ensuring flexibility to adapt to changes in the health care needs of young people (i.e. increased rates of mental health problems); addressing inequities in access among certain youth subpopulations (i.e rural youth, racialized youth, LGBTQ youth, disabled youth); and ensuring meaningful youth participation in the design and implementation of the services targeting them.

Conclusions

The implementation of youth-friendly health care services might take diverse forms depending on contextual and health system factors. Challenges such has flexibility and sustainability, equity and youth participation remain common.
Free trade for development? Balancing the opportunities and the risks

Julie Godelieve Steendam-G3W-M3M; Liesbet Vangeel-FOS

Background: Unacceptably high levels of global inequality and precarious employment are recognized as a serious threat for the achievement of the universal right to health. The broad scope of most modern trade agreements (FTAs) leads to substantial, however mostly indirect, effects on the various social determinants of health. As increased trade is one of the pathways set forward to achieve the Sustainable Development Goals, the aim of this paper is to address the power relations that shape the global trade framework and to review the impact of trade agreements on various aspects of health such as the health of workers through employment and working conditions.

Methods: Analyses of health impact assessments of recent trade and investment treaties (e.g. DR-CAFTA, TPP) and text analyses of treaties in negotiation.

Results: A recent trend in international trade shows the return of bilateral negotiations, as opposed to the tentative of GATT and WTO to set global standards. However, negotiations between countries with different economic strength pose reasons for concern. Rules established by FTAs tend to deepen already existing social and economic inequalities. For example, FTAs can cause a loss of government revenue, restraining the capacity to implement social policies. Furthermore, liberalization and provisions on the protection of intellectual property can compromise the accessibility of essential health care services and medicines. Lastly, determinants of health can dramatically change when the policy environment is weak on protection of the public health sphere. For example, precarious labour conditions affect the health of workers and families and are associated with poorer health status. The flexibility demanded by the competition shaping the global economic system enforces the need for uncertain (e.g. temporary) working conditions, shaping the global trade framework. Labour provisions in FTAs prove the most efficient if backed by broad civil society involvement and strong rules on enforcement and mechanisms of control.

Conclusion: The dominant framework of current free trade agreements may result in negative effects on the various social determinants of health, due to amongst others shrinking governments; regulatory policy space to install pro-health measures. Concerning the health of workers, trade can contribute to global growth and job creation, but this growth isn't necessarily contributing to improvement of employment and working conditions if they aren't accompanied by adequate standards regarding social protection and enforcement of social labour organisations. A comprehensive and binding multi-actor impact-analyses of free trade agreements is recommended.
The genesis of socioeconomic inequalities in healthcare utilisation in Indonesia: a repeated cross-sectional study from 1993 to 2014.

Co-authors: Joko Mulyanto-Department of Public Health, Academic Medical Center, University of Amsterdam; Dionne Sofia Kringos-Department of Public Health, Academic Medical Center, University of Amsterdam; Anton Edward Kunst-Department of Public Health, Academic Medical Center, University of Amsterdam

Background

Recent studies showed relatively large extent of healthcare inequalities in Indonesia. Less is known about the trends of healthcare inequalities across the time in Indonesia. This study aims to comprehensively describe how healthcare inequalities have been evolved in Indonesia during the period of 1993-2014.

Methods

Data from four waves of Indonesian Family Life Survey (IFLS) in 1993, 2000, 2007, and 2014 were used in this study. Sample size was ranged from 14,202 individuals in 1993 until 42,300 individuals in 2014. Income was used to measure socioeconomic status. Healthcare utilisation was measured for outpatient and inpatient care in different level of care and type of provider. Relative index inequality (RII) was used to measure the magnitude of inequality.

Results

Large extent of inequalities both in absolute and relative inequalities in all type of healthcare and provider were observed in 1993. Inequalities in outpatient care in primary care, public provider, and private provider tend to decrease from 1993 to 2007, but have an increase in 2014. Inequalities in inpatient care show increases in total utilisation and in public provider from 1993 to 2000 and gradually decrease from 2000 to 2014. Inequalities of inpatient care in private provider continue to decrease from 1993 to 2014. Secondary care and private provider have relatively larger extent of inequalities compare to their counterparts. Trends of healthcare inequalities are significant for every level of care and type of provider.

Conclusion

There are significant trends in healthcare inequalities in Indonesia during the period of 1993-2014. Changes in healthcare system and the general living situation likely explained how healthcare inequalities evolve over the time in Indonesia.
Michael Harvey, San Jose State University
Poster Number: 159

Global Health Socialism: A Novel Framework for Realizing the Goals of Alma Ata and Global Health Equality

Co-authors: Michael John Harvey-San Jose State University

Purpose:

Socialist movements have historically played a central role in establishing universal and equitable health care systems in high, middle, and low-income countries. This paper briefly reviews the historical role of socialist movements in the fight for health equity and, drawing on those insights, proposes a novel framework for equity-driven political engagement to ensure universal access to health care and establish robust health care systems around the world: global health socialism.

Content:

The global health socialism framework includes: 1) the goal of equal access to the highest quality health care services to everyone on the planet, 2) the establishment of sustainable public financing mechanisms though national and international redistributive public policies, 3) intersectional and international class struggle to realize those policies, and 4) critical political economy analysis of the role of the national and international capitalist class, corporate entities, and imperial nation-states in creating and maintaining the structural determinants of global health inequalities that result in excess morbidity and mortality among the global poor. The paper closes with a discussion of specific short-term demands to be adopted by those utilizing the global health socialism framework, such as significantly augmented foreign aid budgets, the abolition of international pharmaceutical and medical device intellectual property law, and ‘reverse-brain-drain’ health professional training.

Significance:

The global health socialism framework responds to the increasing political salience of socialism within high-income countries, the need for progressive frameworks of engagement within the field of global health, and longstanding and persistent global health inequalities. This framework provides an approach to global health engagement that is explicitly political, conflictual, critical, and equality-focused. The global health socialism framework constitutes a challenge the neoliberal austerity regime that characterizes much of contemporary global health. Finally, this framework offers a positive vision for realizing, and going beyond, the laudable goals of the Alma Ata Declaration.
Differential programming: A potential solution to improve coverage and equity in maternal health services in hard-to-reach districts in Bangladesh

Co-authors: Sk Masum Billah-International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b); Imteaz Mannan-Save the Children International ; Joby George-Save the Children International ; Sanwarul Bari-International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b); Quazi Sadequr Rahman-International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b); Shams El Arifeen-International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b); Ishtiaq Mannan-Save the Children International

Background: Despite of the commendable improvements in key maternal health care coverage, the latest national estimate (BMMS 2016) showed a stalling of maternal mortality ratio in Bangladesh. Improvements in coverage of maternal health interventions have often been undermined by geographic and socioeconomic inequity.

Method: USAID funded MaMoni project implemented a basic intervention package including ensuring adequate logistics and supplies, improving health workers skills and referral linkages, deploying community volunteers for awareness raising and community micro-planning meetings for services coverage tracking in all sub-districts of Habiganj district. Additional inputs in three hard-to-reach sub-districts included infrastructural improvement of health facilities, filling-up the vacant posts, employment of private community-based skilled birth attendants and provision of referral transportation. We conducted household surveys at baseline (2010) and at endline (2014) to assess the improvements in coverage of antenatal care (ANC) from medically trained providers and skilled birth attendance (SBA). We interviewed 2209 women, who had a pregnancy outcome in one year preceding the survey, at baseline and 2200 women in endline. We used logistic regression models to estimate the changes in ANC and SBA coverage in both hard-to-reach and non hard-to-reach areas after adjusting for changes in household characteristics and women background over time. Change in wealth inequity was assessed by concentration index.

Results: We found significant improvements maternal education, parity, housing, sanitation facility, electricity connection and possession of mobile telephone from baseline to endline both in non hard-to-reach and hard-to-reach areas. In non hard-to-reach areas, the coverage of one ANC from medically trained provider and SBA increased significantly from 42% to 64% (AOR 1.89, 95%CI: 1.58 - 2.27, p&lt;0.001) and 19% to 32% (AOR 1.52, 95%CI: 1.24 - 1.86, p&lt;0.001) respectively between baseline and endline. In hard-to-reach areas, we found higher increase in ANC coverage, from 28% to 62% (AOR 3.29, 95%CI: 2.47-4.39, p&lt;0.001) and SBA from 10% to 22% (AOR 2.1, 95%CI: 1.42-3.10, p&lt;0.001). ANC coverage gap between hard-to-reach and non hard-to-reach areas declined significantly (Adjusted DID -11.2%, p&lt;0.001) from baseline to endline, however, SBA coverage gap remained similar (Adjusted DID 1.8%, p=0.49). Analysis of concentration index showed, wealth inequity in ANC coverage significantly declined (p&lt;0.001) over time in both areas. For SBA coverage, wealth inequity decline was statistically significant (p&lt;0.001) in non hard-to-reach areas only.

Conclusion: Differential programme packaging for hard-to-reach and non-hard-to-reach areas of MaMoni programme showed promising impact in improving coverage and equity in key maternal health interventions.
Evidence Based Planning to Maximise Coverage of Treatment Services for Kala-Azar in Resource Constraint Settings

Co-authors: Kingsuk Misra-Mott MacDonald; Vikas Aggarwal-Mott MacDonald; Sakib Bursa-Medecins Dans Frontiere (MSF)

Background

KalaCORE is a UK aid funded programme, managed by Mott MacDonald in collaboration with DNDI, MSF and the LSHTM, which supports the control and elimination of Kala-Azar (KA) in six countries in Africa and Asia. KA is a neglected tropical disease affecting millions of most marginalised communities in the most under-developed regions in the world. In Asia, governments of India, Bangladesh and Nepal are committed to achieve elimination of KA as a public health problem. This presentation is on how KalaCORE collaborated with India’s governments to capacitate the health systems in one of the most challenging scenarios - to deliver the newly recommended single day AmBisome® treatment for KA, in place of erstwhile 30 days treatment, thus aiming to reduce huge VL economic and disease burden at both health systems and at the community level.

The Problem

The states of Bihar and Jharkhand, the most poor and under-developed states in India, contribute to more than 50% of the global burden of KA. Despite having strong political will, the states were struggling to ensure availability of quality healthcare services at the grassroots due to multiple issues including lack of capacity, poor infrastructure and irregular supply of health commodities. Further, poverty, lack of awareness and education level compounds the vulnerability of the communities to wide range of diseases and ill-health.

Roll out of treatment availability through AmBisome® necessitated cold chain at all levels, specialised training of the healthcare workers on preparation and dosage, and raising awareness in the communities. However, the biggest challenge was scale, as the target was to make services available to the at-risk 165 million population, spread over wide geography.

Results-discussions

Results focused strategic planning was undertaken, with the aim to achieve maximum coverage of the quality KA treatment services through AmBisome® in a cost-effective way. Rather than only using epidemiological data to select health care centres for treatment delivery points, treatment sites were selected using multiple criteria which included epidemiological data, operational feasibility, availability human resources, and communities preferences such as patient’s health-seeking behaviour patterns. Further, rather than making one-time investments, active hand-holding, co-working with government ensured adequate adjustments in government budgets and processes for sustainable outcome.

Conclusion

Result oriented and evidence based planning, with policy level support from the government (incentives), helped to achieve 98% of treatment coverage with AmBisome®
Long-term effects of user fee reduction and removal on utilization of facility-based delivery, a controlled interrupted time-series analysis in Burkina Faso

Co-authors: Hoa Thi Nguyen-Heidelberg University Hospital, Institute of Public Health, HealthEconomics and Health Financing; David Zombré-Montreal University, School of Public Health, Canada; Valéry Ridde-Montreal University Public Health Research Institute (IRSPUM); Manuela De Allegri-Heidelberg University Hospital, Institute of Public Health, HealthEconomics and Health Financing

Background: User fee reduction and removal policies have recently emerged as promising health financing initiatives to increase needed healthcare use in sub-Saharan African countries. While the body of literature on the topic is extensive, little rigorous evidence exists on the long-term effects of these policies on utilization of delivery care. In addition, no evidence exists on the marginal benefit of full removal of user fees compared to partial reduction. We aimed to fill these important knowledge gaps by assessing long-term effects of both partial reduction and complete removal of user fees on utilization of facility-based delivery.

Method: Our study took place in four districts in the Sahel region of Burkina Faso, where the national user fee reduction policy launched in 2007 (lowering fees at point of use by 80%) co-existed with a user fee removal pilot launched in 2008. We used health management information system data to construct a controlled interrupted time-series analysis and examine both immediate and long-term effects of the 80% reduction policy and the removal pilot from January 2004 to December 2014. We placed two interruptions in our time-series: one on January 2007 and the other on September 2008 to examine the effects of the national 80% reduction and the removal pilot respectively. The intervention group included two districts (Dori and Sebba) where the removal pilot was implemented, while two districts (Djibo and Gorom) where there was only the 80% reduction served as the control group.

Results: We found that both reduction and removal policies led to a sustained increase in the use of facility-based delivery: the reduction policy produced an annual increase of approximately 4% (p<0.01) over eight years; the removal pilot further enhanced utilization and produced an additional increase of about 4% (p<0.001) annually over six years. These increasing trends were not sufficient to reach maximum coverage. Instead, they stabilized three years and four years after the onset of the reduction policy and the removal pilot respectively.

Conclusion: Our study provides further evidence that user fee reduction and removal policies are effective in increasing service use. Complete user fee removal produced an additional beneficial effect on service use compared to 80% reduction, but was not sufficient to ensure that all women deliver in a health facility. Our study suggests that a multi-sectorial approach, addressing barriers beyond direct payments at point of use, is needed to ensure that all women use skilled birth attendance.
Conceptualizing health to reduce health inequity

Co-authors: Kristine Bærøe - University of Bergen; Berit Bringedal - Institute for Studies of the Medical Profession

Purpose: The World Health Organisation (WHO) defines health as "... a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The definition has been criticized for various reasons. It does not reflect that people can adapt to their conditions and feel healthy despite chronic disease or disability; it cannot be operationalized; it is limitless and may therefore contribute to unjustified medicalization; and the definition is insensitive to distinctions between the severity of health deficiencies and correlating distinctions in claims for health care. The aim of this presentation is to propose a new conceptualisation of health that not only addresses all of these concerns but that also, if guiding policy-making, can reduce health inequity.

Focus/content: We argue that given the epidemiological knowledge of health inequalities across and within nations, WHO's individual-centred definition of health should be modified into an ethico-political understanding of health that is ethically justified and can be applied to influence fair distribution of health in a society. The suggested conceptualisation revolves around a specified threshold of human functionality. This threshold is set at the level of functionality that empirically correlates with absence of disease and infirmity: "Health is the physical and mental capacity required to realise individual and social rights and duties, and to participate in individual and social activities correlating with lack of disease and infirmity." This conceptualisation can influence allocation of healthcare resources so that people are provided equal health conditions to benefit from activities that are observed to correlate with further absence of disease and infirmity, e.g. education, work, physical activity and friendships. In this way, the concept can reduce health inequality and promote the related interpretation of health equity.

Significance for conceptual research on health: Importantly, the proposed conceptualisation coherently joins forces with other statements and initiatives on social determinants of health. Also, the definition is elastic in several critical ways as it allows for: i) individual differences in adoption, self-management and resilience, ii) contextualisation and variation in environmental effects on perceived health issues (e.g. social functioning in a crowded city may require different abilities than social functioning in a small village), and iii) dynamic, substantive interpretations of health in accordance with new epidemiological findings.

Targeted audience: This conceptual approach should be of interest to everyone working to promote health, i.e. healthcare workers, healthcare planners, researchers and policy-makers, as well as users of healthcare systems.
Akira Shibanuma, The University of Tokyo
Poster Number: 164

**A low coverage and large inequality in the achievement of the continuum of care in maternal, newborn, and child health in 58 developing countries**

Co-authors: Akira Shibanuma-The University of Tokyo

**Background:** In developing countries, the coverage of an essential intervention, such as skilled facility-based delivery, has improved dramatically in maternal, newborn, and child health. However, such improvement does not guarantee that every woman and child receives all the essential services along continuum of care (CoC). This study evaluated the coverage and its inequity in CoC in developing countries.

**Methods:** This study pooled the latest Demographic and Health Survey dataset from 58 developing countries conducted between 2005 and 2016. A pair of woman and child was considered to achieve CoC by receiving antenatal care four times or more, skilled facility-based delivery, and the first postnatal care for mothers within two days of delivery. They were regarded as achieved extended CoC by achieving CoC in addition that a child received a set of essential vaccinations. The coverages were calculated weighted by eligible reproductive aged population in a country. Inequality was evaluated using slope and relative index of inequality according to women’s level of education and their household wealth.

**Results:** Among 585,687 pairs of women and children, 30.3% achieved CoC and 24.3% achieved extended CoC while 51.7% of women had skilled facility-based delivery. Compared with skilled facility-based delivery, slope index of inequality in achieving CoC was smaller (less unequal) but relative index of inequality was larger (more unequal). Relative index of inequality by women’s level of education was 1.47 (95% confidence interval [CI]: 1.45 to 1.48) for skilled facility-based delivery, 2.31 (95% CI: 2.29 to 2.33) for achieving CoC, and 2.19 (95% CI: 2.15 to 2.23) for achieving extended CoC.

**Conclusion:** The majority of women and children did not achieve CoC in MNCH in developing countries. Inequity was more extensive in the coverage of achieving CoC as compared with conventional coverage of maternal health services, such as skilled facility-based delivery.
Leaving no one behind: marginalized voices in global health discourse

Co-authors: Sameera Hussain-University of Ottawa; Peter S Hill-University of Queensland

Background:
The UN’s World We Want platform claim to “leave no one behind” received enthusiastic response for consultations around health leading to the Sustainable Development Goals (SDGs). Yet structural violence isolates many communities, preventing them from accessing not only health services, but also the platforms intended to give voice to people to elucidate their needs.

Marginalized communities have a holistic understanding of health much broader than just health: lived experiences in their social, environmental, and political context highlight issues around livelihoods, land tenure, and access to basic services, along with quality health care.

Methods
For this qualitative study, papers under the theme of “voices of the marginalized” arising from the Go4Health research consortium were identified. This was followed by a grounded thematic analysis of 12 publications that covered community consultations in 9 countries with marginalized groups. NVivo software was used during the coding phase. Upon the production of node summary reports, codes were organized around emerging themes and sub-themes. Finally, an internal reliability check was completed.

Results and Discussion
Communities articulated health and identity, and described their unity in the face of structural violence. They have a pragmatic understanding of their contexts, a clear assessment of physical and geographical constraints, of institutional deficits and barriers, and the need to contend with the threat of state violence and displacement. Sometimes their needs are different from that of the dominant groups in their countries, and in other times—and all other places—their basic needs are the same as that of everybody else in the world. The structures mandated to deliver these entitlements are unresponsive, jeopardizing not only the health of the marginalized, but also the determinants of their health.

Communities’ struggles with food insecurity, water scarcity, financial challenges, and obstacles to education and communication reveal that people’s most urgent health priorities are not limited to health per se, but display an extraordinary diversity of intersectional experiences that diminish people’s capabilities to attain good health and well-being.

This research demonstrates the intersections between the social, political, and economic barriers that prevent people from leading lives in which they feel a sense of dignity and capacity to bring about change. Communities are aware that transformation is not possible without structural change that must involve both civil society and the state—without access to resources, developing the capabilities to participate in platforms for being heard and forums for change continue to be a challenge.
“We’re not here to expand Professor So-and-So’s career”: how a new Australian academic health centre is engaging with a health equity agenda

Co-authors: Alexandra Edelman-Division of Tropical Health and Medicine, James Cook University (PhD Candidate); Stephanie M Topp-Division of Tropical Health and Medicine, James Cook University; Judy Taylor-Division of Tropical Health and Medicine, James Cook University; Pavel V Ovseiko-Radcliffe Department of Medicine, Oxford University

Background

Academic Health Centres (AHCs) are collaborations between health service delivery and higher education organisations that are often expected to contribute to building equitable health systems through combining health care, research and health professional education. We identified a need for empirical research to understand how AHCs are engaging with a health equity agenda including how they are addressing health disparities and their determinants.

Methods

Nested within a larger cross-country multi-case study project looking at the role of AHCs in improving health equity, we conducted a case study of the Tropical Australian Academic Health Centre (TAAHC) in northern Queensland. We conducted semi-structured interviews with 23 health system and university executives, researchers and clinicians and undertook direct observation and document analysis to identify how health equity is characterised, described and operationalised within TAAHC. Data analysis was performed using Osterle’s framework for the comparative analysis of equity approaches in social policy (2002) which builds on three dimensions of equity: the resources to be shared, the recipients of these resources and the principles according to which allocation takes place.

Results

The vision, purpose and intended outcomes of TAAHC (resources to be shared) emphasised opportunities to better address challenges in health service delivery over a vast geographic area. The key mechanism was seen to be ‘translational’ and health services or systems research; prioritised, resourced and undertaken as part of a structured collaborative network of region-wide researchers and clinicians. The intended recipients of these resources were the region’s populations with an emphasis on improving health in rural, remote and Aboriginal and Torres Strait Islander communities, reflecting need-related principles. Recipients also included individual clinician-researchers and the TAAHC member organisations themselves based around expected financial and reputational benefits, which were seen by some as having the potential to corrupt the equity focus of TAAHC. Multiple barriers and threats to TAAHC’s equity-focused aspirations were both described and observed.

Discussion

The majority of interviewees and TAAHC strategic documentation emphasised TAAHC’s potential to enhance the broader health system’s capacity to address health disparities and their determinants based on need-related principles. This study suggests that AHCs are more than just vehicles for growing researchers’ careers and accessing public funding; they are initiatives built around a collective recognition of population health needs and the capacity of academic-health system collaborations and translational research to improve health care and outcomes.
Equity in universal health systems: hip arthroplasties as a proxy measure for access to healthcare in the public sectors of Brazil and Scotland

The central tenets of both the National Health Services of Scotland (NHS) and the Unified Health System of Brazil (SUS) are universality and equity of access to services on the basis of need, free at the point of delivery. Redistribution is designed into the Scottish system. This study uses a mixed methods approach to analyse access to health care and the influence of socioeconomic factors using hip arthroplasty as a proxy measure for equity in the public health care systems of Brazil and Scotland.

This research happened in two stages. First, an ecological study using routine data of hip arthroplasty rates in the public sector by country and geographic region (2009/10 to 2012/13). Second, inequalities in access due to socioeconomic status were analysed for Scotland using the Scottish Index of Multideprivation (SIMD) in association with standardised rates; in Brazil two socioeconomic indicators (Gini and Human Development Index - HDI) were modelled (Zero Inflated Poisson - ZIP) with standardised municipal rates of arthroplasties (5,565 municipalities); and a Pearson's correlation.

There is an almost eight fold difference in treatment rates between Brazil (7.8-8.3/100,000) and Scotland between 2009/10 to 2012/13 (57.7-61.1/100,000). There are geographic differences within both countries. The health board areas with the lowest and highest regional rates in Scotland were Glasgow & Clyde with rates of 29.2-40.2/100,000 and Ayrshire & Arran with a rate of 60.2-88.5/100,000 respectively; in Brazil the lowest and highest regions were the North Region (2.3-4/100,000) and South Region (15.4-17.9/100,000) respectively. The two least deprived quintiles (4 and 5) in the Scottish population had both a higher utilisation (42.6%) and proportional growth in number of procedures than the two more deprived (1 and 2); quintile 3 had no consistent changes. In Brazil municipal rates showed a negative correlation with Gini (r=-.226) and a positive correlation with HDI (r=.396); the ZIP model demonstrated that for every standard deviation (SD) change in Gini, rates would be 23% higher or lower, for HDI each SD would lower or increase rates by 56%.

Although both countries aspire to universal health care, Brazil is very far from reaching that goal due to the widespread socioeconomic differences and that the health system does not redistribute resources, staff and beds according to need. Scotland appears to be achieving universal access on the basis of need, nevertheless there are geographic and socioeconomic differences in access that need to be carefully monitored and understood.
Reducing mortality by expanding primary care to the urban poor in Rio de Janeiro, Brazil

Co-authors: Thomas Hone-Imperial College London; Claudia Medina Coeli-Federal University of Rio de Janeiro; Betina Durovni-Fiocruz, Rio de Janeiro, Brazil; Christopher Millett-Imperial College London

Background

Expanding primary care is essential for UHC and the third Sustainable Development Goal (SDG). Increasing coverage of and access to primary care for disadvantaged populations is crucial. In Brazil, despite nationwide expansion of primary care under the world-renowned Family Health Strategy, coverage has lagged behind for urban poor populations. The city of Rio de Janeiro has been no exception with only 7.2% primary care coverage in 2008. Between 2008-2015 political commitment and investment in primary care increased the number of health teams (from 128 to 855) and coverage rose to 46.2%. Services has been focused towards low-income populations in the city, yet to-date, there is little understanding of the health impacts of this expansion.

Methods

A retrospective cohort was created by linking the social welfare registration records of 601,208 adults aged 18-75 years old with their mortality records for the years 2011-2014. We identified deaths from select primary care sensitive conditions (including infectious diseases, COPD, asthma, cardiovascular disease (CVD), and diabetes) and also from external causes. For those individuals with primary care registration records, the time of registration was linked to the cohort. Cox proportional hazards regression was used to compare time-to-death between primary-care registered and non-registered individuals adjusting for age, sex, race, literacy, household income, and dwelling characteristics. Hazard ratio (HRs) were reported. Time-varying cohort entry and primary care registration were also accounted for.

Results

The study included a total of 1,839,612 person-years of observation. Just over half (53.9%, n=324,097) of the cohort were registered with primary care services. There were 670 and 887 deaths from primary care sensitive causes in the registered and unregistered populations respectively. Demographic and socio-economic characteristics between the groups were highly comparable. In adjusted models, mortality rates of registered individuals were 18.3% lower (HR:0.817; 95%CI: 0.732,0.911) than unregistered individuals - mainly from COPD and CVD. There were no differences between the groups in mortality from external causes.

Conclusions

Robust evidence from a middle-income country like Brazil, that primary care is associated with lower mortality in deprived urban populations, demonstrates the importance of primary care as part of UHC. This evidence can help drive forward the policy agenda for expanding primary care to vulnerable, uncovered populations such as the urban poor. In 2018, funding cuts are closely primary clinics in Rio de Janeiro, with worrying implications for health, inequalities, and progress towards UHC and the SDGs.
An equity analysis on the costs of access to and use of health services in Tanzania

Co-authors: Peter Binyaruka-Ifakara Health Institute; Josephine Borghi-London School of Hygiene and Tropical Medicine

Background: Several barriers hinder households from access and use of health services, especially in low- and middle-income countries. The cost of access to and use of services is one of the barriers: this can include the direct (money) costs of transport and services use, or indirect costs of labour productivity loss. Direct and indirect costs contribute significantly to welfare loss, and may lead to catastrophic spending especially among poor households. Although some studies have documented the direct costs, little is known on the burden of direct and indirect costs of accessing and using health services and how these are distributed among socioeconomic groups, especially in settings with poor health systems. We provide such evidence from Tanzania.

Methods: We used data from 1407 patient exit interviews in 150 facilities from eleven districts in Tanzania. The survey was in January 2012, which collected information on indirect costs: time costs of travelling, waiting and consultation time, and direct medical and non-medical costs. To assess the inequities, all costs were disaggregated by patient's socioeconomic quintiles and place of residence. We used three measures of inequity: equity gap, equity ratio and concentration index.

Results: We found the average and median travel time were 30.1 minutes and 20 minutes, respectively. The burden of travel time as an indirect cost was significantly greater among the poorest. The average and median direct travel cost was 0.50 USD and 0.23 USD, respectively, and this cost burden was significantly higher among the least poor. Both direct and indirect costs of access were similar between rural and urban residents. The average waiting time and consultation time were 46.7 minutes and 12.9 minutes, respectively. The consultation time was similar across quintiles and location, while the poorest patients waited longer than their counterparts. 17.8% of patients paid for healthcare and paid on average around 0.96 USD. The least poor patients and urban residents paid more than their counterparts.

Conclusion: Tanzanian health system should ensure equitable healthcare access and use to all people for universal coverage. While exemptions seem to be effective at reducing the burden of direct medical costs among the least poor, strategies are needed to tackle indirect costs which are borne more by poorer groups. Such strategies could include: establishment of maternity waiting homes, transport vouchers, incentivising providers to target the poor, increase outreach and social protection measures. Other responses are beyond the health sector and needs a cross-sector collaboration.
Jayne Rowan, Marie Stopes International
Poster Number: 170

**Improving targeting mechanisms to identify the poor in the National Health Insurance Scheme in Ghana: lessons learned from the African Health Markets for Equity programme.**

Co-authors: Jayne Rowan - Marie Stopes International; Nirmala Ravishankar - Consultant for Marie Stopes International; Luke Boddam-Whetham - Marie Stopes International

**Purpose**

Identifying the poorest of the poor is a challenge to implementing universal coverage in many LMICs. This presentation shares lessons of an innovative approach to identify eligible indigents through a digitalized proxy means test tool (PMT) for free enrolment into the National Health Insurance Scheme (NHIS) in Ghana.

**Focus/content**

A fee exemption into NHIS in Ghana is provided for the poorest, yet studies show the poor are the least enrolled in the scheme. In 2015, only 23% of the 6.4 million living in poverty were covered.

Identification of the poor has been a challenge to implementing the indigent exemptions policy under NHIS with no formal system in place. The de facto approach is an informal community-based selection process, which is open to manipulation. The Health in Africa initiative of the World Bank Group, a partner under the Africa Health Markets for Equity (AHME) programme from 2012-2017, demonstrated the effective use of an electronic tool for identifying and targeting the poor. A paper-based PMT was being implemented manually by the Ministry Of Gender and Social Protection for its cash transfer program. AHME introduced technology to increase usability and transparency by digitising the PMT onto a tablet device, linked to a secure cloud-based web service to give results in real time. AHME modified beneficiary identification methodology by using an enumeration agency to systematically go to each household in pre-selected areas. Households who qualified for exemption were instantly given receipts to register with NHIA for free.

Digitisation and deployment through household enumeration proved successful with 109,668 households in nine demonstration districts from Mar 16 – Apr 17 surveyed, with 175,669 individuals (24% of households) identified as exempt. However exemption still requires registration that is done in real time before a card is issued. Having a NHI registration team travel with the enumeration team as planned failed due to connectivity issues. 62% of individuals identified have gone on to register with NHIA.

Systematic identification has minimised human arbitrariness. AHME partners are working with NHIA to institutionalise the system.

**Significance for the sub-theme area/field-building dimension of relevance**

As part of strategies for achieving UHC, governments in LMICs are increasingly embracing government health insurance schemes. Improved targeting mechanisms are needed for identifying the poor to ensure that indigents are not excluded. AHME’s intervention can be replicated elsewhere.

**Target Audience**

NHI agencies and ministries of health, donors and implementing partners working on poverty reduction programmes.
Devaki Nambiar, The George Institute for Global Health
Poster Number: 171

Unpacking vulnerability as proxy of health-seeking networks among the urban poor: lessons for strengthening public service delivery from two Indian cities

Co-authors: Devaki Nambiar - The George Institute for Global Health; Mathew Sunil George - Indian Institute of Public Health - Delhi

Health research in India has tended to focus on specific health burdens with an emphasis on rural dwellers. The health of urban dwellers is assumed to be better, even as there is now growing evidence to the contrary. Further, evidence is sparse on how health seeking among urban dwellers facing vulnerabilities is nested in geographical, social, and other contexts. Public access to care is highly circumscribed, even as it remains the main source of care for groups facing social, economic and other forms of disadvantage in Indian cities.

A two-year longitudinal qualitative study is currently underway in multiple Indian cities, seeking to understand how population groups facing occupational, residential, and social vulnerabilities groups seek care for health. Participant observation, focus group discussions and interviews are being carried out with these groups as well as health system actors - municipal, state, non-governmental - who provide care for them. Findings are being analysed using Atlas.TI software employing grounded approaches.

In Shimla, head-loaders from the “Khan community” comprise seasonal migrant cultivators from Kashmir that insist they keep their jobs because of their good health. When health issues emerge, they rely heavily on existing social networks for care-seeking. Kochi’s sex work community has become more fragmented due to the changing nature of “flying sex work.” However, health seeking appears to rely on existing linkages that are also occupation-driven. Delhi’s homeless population relies on fledgling networks created by providers of urban shelters who struggle to link the range of social services required to seek care and maintain health.

Health issues among the vulnerable poor in India are tied to the labels that are used to identify them in policy. However, in lived experience, these are intricately connected to notions of identity, and health-seeking is carefully chosen to forestall judgement and stigma – often resulting in its insular nature. For public sector strengthening to accommodate these features shall require greater emphasis on greater efforts to directly link to and respect the lifeworlds of the vulnerable poor.
Do free caesarean section policies increase inequalities in Benin and Mali?

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Background

Access to caesarean sections is crucial to reduce maternal mortality in Sub-Saharan Africa. But inequalities exist in terms of access to caesarean sections, depending on the socioeconomic status or the place of residence of women. Benin and Mali introduced user fee exemption policies focused on caesarean sections in 2000's. We have already shown in a previous study that these policies had positive impact on access to caesarean sections and facility-based deliveries among all women, but the impact on socioeconomic inequalities is still highly uncertain. The objective of this study was to observe trends in urban/rural and socioeconomic inequalities in access to caesarean sections and facility-based deliveries before and after the free caesarean section policy was introduced in Benin and Mali.

Methods

We used data from Demographic and Health Surveys (DHS) over three periods from the end of the 1990s to the early 2000s in Benin and Mali. We evaluated the trend of inequality in terms of two outcomes: caesarean sections and facility-based deliveries. Adjusted odds ratios were used to estimate whether the distributions of caesarean sections and facility-based deliveries favored the least advantaged categories (rural and non-educated women) or the most advantaged categories (urban and educated women). Concentration curves were used to observe the degree of wealth-related inequality in access to caesarean sections and facility-based deliveries.

Results

We analyzed 47,302 childbirths (23,266 in Benin and 24,036 in Mali). In Benin, we found no difference in access to caesarean sections between urban and rural women or between educated and non-educated women. However, the richest women had greater access to caesarean sections than the poorest women. There was no significant change in these inequalities in terms of access to caesarean sections and facility-based deliveries after introduction of the free C-section policy.

In Mali, we found a reduction in education-related inequalities in access to caesarean sections after implementation of the policy (p-value=0.043). Inequalities between urban and rural areas had already decreased prior to implementation of the policy, but wealth-related inequalities were still present.

Conclusion

This study provides evidence that urban/rural and socioeconomic inequalities in caesarean sections access did not change substantially after the countries implemented free caesarean sections policies. We recommend switching to mechanisms that combine both a universal approach and targeted action for vulnerable populations to address this issue and ensure equal health care access across individuals.
Factors associated with self harm in South India: A Quantitative Study

Co-authors: Sudeep P K-Mysore Medical College & Research Institute

WHO estimates that about 170,000 deaths by suicide occur in India every year with especially high risks in young people in south India, where about half of deaths by suicide are due to poisoning, principally ingestion of pesticides. There are limited data on this from population-based studies in India, and these are largely restricted to reporting rates of self harm and/or suicide, and their associations with socio-demographics.

A wide range of clinical, social and behavioral factors are known to influence the risk of self harm and suicide. In India, younger age, rural residence, use of alcohol, previous self-harm, presence of psychological distress, socio-economic adversity and access to poisons are reported as risk factors. There are known to be differences in suicide and self harm in India compared to high-income countries. A better understanding of protective and risk factors of suicide is essential for the development and implementation of preventive measures to reduce this burden to families and society.

Examining cultural and region-specific antecedent behaviors and their relationship with suicidal intent and method of self-harm is a step towards more accurate identification of individuals at high risk of suicide to inform policy and service developments. Therefore, I will explore the associations of the socioeconomic position, antecedent behaviors, mental disorders, method of self harm, suicidal intent at baseline with suicidal intent and recurrence of self harm in a cohort of 1870 self harm survivors in Mysore. They were initially interviewed in 2014 and a sample were followed up two years later in 2016. This rich data set includes information on socio-demographics, details of the self-harm, history of previous self-harm, substance use, a range of behaviors in the month preceding the incident of self harm, Pierce suicide intent scale scores, psychiatric diagnoses, common health impairments, social support and networks, disability, and health service utilization.

The findings from this analysis will form the basis of a poster presentation and a paper for publication in a peer-reviewed journal. The findings will also inform the development of narrative and semi-structured interview frameworks for further research on self harm in South Asia under the auspices of the South Asia Self Harm research capability building Initiative (SASHI) and will form part of a program of work to inform both policy and practice at local and national levels.
Does healthcare voucher provision improve utilization in the continuum of maternal and newborn care for poor pregnant women?: Experience from a quasi experimental study

Co-authors: Shehrin Shaila Mahmood-icddr,b; Mark Amos-University of Portsmouth; Shahidul Hoque-icddr,b; Mohammad Nahid Mia-Unicef; SMA Hanifi-icddr,b; Mohammad Iqbal-icddr,b; William Stones-Malawi College of Medicine; Saseendran Pallikadavath-University of Portsmouth; Abbas Bhuiya-Partners in Population and Development

Background: Improving maternal health is one of the major developmental goals, particularly for developing countries like Bangladesh. Despite the steep fall in maternal mortality ratio over the past decade, it has currently stalled at 196 per 100,000 live births in Bangladesh. Considerable challenges remain in ensuring comprehensive access to maternal care. Since 2007, the country is implementing a voucher scheme as a programmatic response to reducing financial, geographical and institutional barriers, particularly for the poor-pregnant women. However, the effect of the scheme on the continuum of maternal care and the extent to which this extends to newborn care is yet to be explored. With the growing attention of development organizations around the world on ensuring continuum of care to improve maternal, newborn and child health, the current paper analyses the effect of vouchers on the entirety of maternal and newborn care.

Methods: The study was conducted in Chittagong and Sylhet divisions of Bangladesh in 2017. 3,593 women with children aged 0-23 months were interviewed. Cluster analysis was used based on utilisation across the continuum of care. The clusters were regressed on voucher receipt to identify underlying relationship between voucher receipt and care utilization after controlling for other variables. Predicted probabilities of cluster membership were generated to aid interpretation.

Results: The study identified 4 clusters of women based on service utilization. Continuity in service utilization gradually decreased from one cluster to the next. 20.3% women belonged to the highest-utilization cluster maintaining complete continuum of care, whereas 39.3% belonged to the lowest-utilization cluster with intermittent or discontinued use of care. Voucher receipt encouraged utilization of complete continuum of care and reduced probability of belonging to low-utilization cluster. For poor pregnant women, the probability of voucher recipients belonging to the highest-utilization group was higher than that of the non-voucher poor women (36.1% vs. 7.1%). On the contrary, probability of voucher women being in the low-utilization cluster was much lower than the non-voucher women (15.7% vs 51.8%).

Conclusion: Programmatic investments in many developing countries have historically been directed towards financing individual service components. In recent years it has been realized that access to quality healthcare services in pregnancy, childbirth and postnatal period may yield multiple returns on investment. A coherent continuum based approach to understanding care seeking behavior can be anticipated to have substantial policy implications for the design of programmes aimed at improving maternal, neonatal and child health.
Fiscal space for health at decentralized level in Kenya: the potential impact of fiscal arrangements

Co-authors: Kenneth Munge-KEMRI Wellcome Trust Research Programme; Edwine Wafula Barasa-KEMRI Wellcome Trust Research Programme; Kara Hanson-Faculty of Public Health and Policy London School of Hygiene and Tropical Medicine; Jane Mumbi Chuma-World Bank Kenya Country Office

Background
Universal health coverage (UHC) arrangements anticipate a significant role for public expenditure. Fiscal space for health, the capability of a government to assign more resources to health without affecting its financial and economic position, is a topical concern. While fiscal space for health is usually assessed at national level, fiscal decentralization is a feature of many health systems. The objective of the study was to perform a critical assessment of the implications of decentralization on fiscal space for health at county level and the attainment of UHC in Kenya.

Methods
We used a qualitative multiple case study approach with the unit of analysis being the county. We developed and applied a conceptual framework that accounted for the pillars of fiscal decentralization – revenue and expenditure assignment, intergovernmental transfers and subnational borrowing – together with interactions with changes in the government-citizen relationship, fiscal space at national level and other contextual factors. Three case study counties were purposively selected based on their level of own revenue generation and public health expenditure (PHE), and sophistication of health systems. Data were collected through document reviews (statutes, policies, and reports), in-depth interviews (n=25) and focus group discussion (n=17) with citizens who were members of organised groups (e.g. community-based organisations).

Results
Expenditure and revenue assignments were described in policy and supported by institutional arrangements. Six health-sector conditional grants were in place, four from the national government and two from donors. In practice, there was overlap in performance of functions while others were neglected, and institutional arrangements did not function as required. PHE was negatively impacted by high and growing wage bills even though more health workers were needed to deliver services. PHE was also influenced by irregularity of financial flows from central level, low own-revenue generation, strict public finance rules and greater accountability to citizens. Service mix remained unchanged even though the design and implementation of conditional grants disrupted county planning activities, encouraged hospital-centric expenditure and undermined accountability between national and county levels.

Discussion/Conclusions
Well-functioning institutional arrangements will address conflicts in expenditure assignments and implementation challenges. Dependency on transfers from central level is likely to continue in the near term. The design and operationalization of these transfers, and of conditional grants in particular, is critical to ensuring county-level PHE helps meet equity, efficiency and quality of care goals of UHC.
How far a financial incentive system will motivate health workers in Indonesia’s universal health coverage system?

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Background:

The Indonesia’s Universal Health Coverage (JKN) system uses capitation to “purchase” public primary health care (Puskesmas) services. One of JKN aims is to provide the same benefit and services to the whole population, and capitation is utilized to fund services and incentives to the health workers. The districts also have regional autonomy, so they can also provide their regulation including financial incentive system to support their health goals.

Methods:

We undertook an observational study of 5 districts chosen based on health program priority, status of the Puskesmas, and geographical accessibility. The districts are East Jakarta, Jember, Jayapura, Jayawijaya and South Tapanuli. We use mixed method to collect and analyze data of payment mechanism, individual workload and payments, including incentives, to health workers. The qualitative method consisted of 70 participants for in-depth interviews and 273 participants in 23 small group discussions (SGD).

Result:

The study showed that there are variations in health worker income in terms of type both in the amount and the type of payment they receive. Due to a different system in Jakarta, capitation is incorporated with other Puskesmas income. The health workers in East Jakarta received payment only in the form of salary and local government benefits. The health workers perceived to feel satisfied and motivated, because the local government benefit accounts for up to 70% of the health workers’ total income. In other districts, 60% of capitation is distributed as incentives to health workers. The income from capitation ranges from 11 to 67 percent of the total health workers’ income. The shortage of GPs in most remote areas causes nurses and midwives have more in burden of service but they cannot receive more in their income due to the way capitation is divided as incentive. This creates perceived feeling of unfairness among lower level health workers. In Jember district, private practice contributes up to 41 percent of the total income for some GPs, indicating that the GPs pay greater attention to their private practices.

Conclusion:

A fair and rewarding incentive system might play an important role to support JKN in Indonesia, but some district Governments have limited fiscal capabilities to provide the local incentive and still face difficulties to recruit health workers especially in remote areas. The supply side gap in availability of health workers in different regions makes Indonesia will find difficulties to meet UHC targets.
Financing UHC through State Health Insurance Schemes in Resource Constrained Settings; where will the money come from?

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Background

Nigeria has decentralized health insurance to states to improve UHC. States are tasked with providing their residents with access to a minimum package of health care. Sokoto State’s 2018 population of 5.3 Mn (million) is classified as 60% indigent and 86% vulnerable. To ensure equitable, universal access to quality health care, the government intends to subsidize for the indigent and vulnerable and the rest of the population is expected to contribute. In the face of recession and scarce resources, and a low formal sector percentage of 11.5% (limiting the use of general taxation methods); it became imperative to explore potential funding sources using religiously, culturally acceptable and context appropriate methods, necessary as traditional insurance is considered in compliant with predominant religious teachings.

Methods

A fiscal space analysis was conducted to determine potential additional funding sources across the 5 pillars of fiscal space: Macro fiscal dynamics, Reprioritization, Earmarking, Efficiency gains and External/Private financing. This was analyzed vis a vis the required funding to provide coverage for the poor and vulnerable as classified by the state government.

Results

A conservative target of covering 10% of the vulnerable population was made for 2018 and would require NGN3.37 Billion (Bn) based on an estimated premium rate of NGN7500 per individual. Domestic sources of funding to address these gaps were identified as earmarking of 2% of the state’s Consolidated Revenue Fund (NGN1.12 Bn) and other previously unexplored sources: the Zakat Endowment Funds (an obligatory annual payment under Islamic law on certain kinds of property used for charitable and religious purposes (50% = NGN240 Mn); 1% charge on contracts and capital projects (undeterminable); 1% contributions from Local Government Area allocations (NGN183 Mn); and 15% of the discretionary part of state debt refund (NGN386 Mn). In addition, if health is reprioritized and health expenditure as percentage of total government expenditure increases from 10.7% to 15%, as per the Abuja declaration, additional NGN3.19 Bn could be raised for health interventions including health insurance. In total NGN5.2 Bn could be raised for health, adequate to meet target.

Discussion/Conclusion

These findings resulted in the inclusion of these additional sources of funding in the health insurance law which has been passed by the state parliament. Thorough examination of context and existing opportunities through multi-sectorial collaboration and dialogue beyond the health sector can be used to identify politically feasible potential sources of funding for covering the poor and vulnerable in poor settings.
Improving targeting mechanisms to identify the poor in the National Health Insurance Scheme in Ghana: Lessons learned from the African Health Markets for Equity Programme

Co-authors: Jayne Rowan - Marie Stopes International; Luke Boddam-Whetham - Marie Stopes International; Nirmala Ravishankar - Consultant for Marie Stopes International

Purpose
Identifying the poorest of the poor is a challenge to implementing universal coverage in many LMICs. This presentation shares lessons of an innovative approach to identify eligible indigents through a digitalized proxy means test tool (PMT) for free enrolment into the National Health Insurance Scheme (NHIS) in Ghana.

Focus/content
A fee exemption into NHIS in Ghana is provided for the poorest, yet studies show the poor are the least enrolled in the scheme. In 2015, only 23% of the 6.4 million living in poverty were covered.

Identification of the poor has been a challenge to implementing the indigent exemptions policy under NHIS with no formal system in place. The de facto approach is an informal community-based selection process, which is open to manipulation. The Health in Africa initiative of the World Bank Group, a partner under the Africa Health Markets for Equity (AHME) programme from 2012-2017, demonstrated the effective use of an electronic tool for identifying and targeting the poor. A paper-based PMT was being implemented manually by the Ministry Of Gender and Social Protection for its cash transfer program. AHME introduced technology to increase usability and transparency by digitising the PMT onto a tablet device, linked to a secure cloud-based web service to give results in real time. AHME modified beneficiary identification methodology by using an enumeration agency to systematically go to each household in pre-selected areas. Households who qualified for exemption were instantly given receipts to register with NHIA for free.

Digitisation and deployment through household enumeration proved successful. 109,668 households in nine demonstration districts from Mar 16 – Apr 17 were surveyed, with 175,669 individuals (24% of households) identified as exempt. However exemption still requires registration is done in real time before a card is issued. Having a NHI registration team travel with the enumeration team as planned failed due to connectivity issues. 62% of individuals identified have gone on to register with NHIA.

Systematic identification has minimised human arbitrariness. AHME partners are working with NHIA to institutionalise the identification system.

Significance for the sub-theme area/field-building dimension of relevance
As part of strategies for achieving UHC, governments in LMICs are increasingly embracing government health insurance schemes. Improved targeting mechanisms are needed for identifying the poor to ensure that indigents are not excluded. AHME’s intervention can be replicated elsewhere.

Target Audience
NHII agencies and ministries of health, donors and implementing partners working on poverty reduction programmes.
The role of efficiency gains in expanding fiscal space for health in Nigeria

Co-authors: Emeka Azubike-Health Strategy and Delivery Foundation; Yewande Ogundeji-Health Strategy and Delivery Foundation; Kelechi Ohiri-Health Strategy and Delivery Foundation; Babatunde Komolafe-Health Strategy and Delivery Foundation; Yusuf Auta-Commission of Budget and Planning, Kaduna State, Nigeria

A major component of achieving universal health coverage in many developing countries is reducing out-of-pocket (OOP) expenditure which is a critical demand side barrier to accessing care. Nigeria has the highest OOP expenditure in Africa and government health spending is below par compared to recommended benchmarks. Given the correlation between government spending and improvement in health outcomes, its importance cannot be overemphasized. This study sought to explore and identify viable options to increase health spending in Kaduna state, Nigeria.

Our study involved qualitative and quantitative approaches. First, we developed a conceptual framework to explore fiscal space for health. This included a comprehensive review of literature and theoretical frameworks. Our framework consisted of 6 thematic areas: macroeconomic growth, reprioritization of health, health sector specific sources, developmental assistance/grants, public private partnerships and efficiency gains. Second, we conducted key informant interviews with 13 participants including public expenditure experts and senior program managers and policy makers. Third, we conducted a quantitative desk review to inform our revenue projections and the feasibility of the identified fiscal space options. Data sources included audited reports, government budget and expenditure data, household surveys, health account surveys, annual expenditure reports, and economic growth data.

Building on previous analysis of the health needs in the state, in addition to the current health spending, ₦16bn is required to fund the health system. We found that the health sector can obtain a ₦5.2bn if 80% of budget performance is achieved; premium payments from a planned social health insurance scheme could generate an additional ₦2bn; and earmarked taxes could potentially generate ₦1.5bn. However, health budget performance has been poor (an average of about 50% over the past 5 years) and implementing health insurance or earmarking taxes require legal frameworks and careful design that are time and resource consuming. Efficiency gains in terms of improving health budget performance appears to be the most feasible, sustainable, and cost effective fiscal space option for the State. To obtain potential revenue from this option, the state ministry of health (SMOH) and other health agencies would need to liaise and frequently engage with the ministry of budget and planning and finance to effectively communicate the need to prioritize health in terms of budget release for the sector, which can be achieved by providing measurable evidence of impact, value for money, and accountability for previously disbursed funds.
A new and sustainable approach – Affordable loans and training to establish quality physical rehabilitation care in Western Kenya

Co-authors: Danielle Nijsten-IISAH Foundation; Marieke de Pundert-IISAH Foundation

Inaccessibility to high quality physical rehabilitation care (PRC) causes great impact on people’s lives. People with disabilities face poorer health, higher chances of unemployment, children with disabilities are less likely to go to school and people are often living in isolation due to stigma. According to the World Health Organization the number of patients in need of PRC will increase dramatically in the upcoming years due to ageing populations and the rise of non-communicable diseases.

IISAH (Impact Investment to Support Access to Health) in collaboration with KMET (Kisumu Medical and Education Trust) identified a major gap in the delivery of high quality PRC care in Western-Kenya. No resources are available to clinic owners in Kenya to improve quality. Neither are any guidelines or requirements in place on quality of care. IISAH in collaboration with KMET made it their goal to make high quality PRC accessible to all.

To achieve this goal the Physio-Rehab Project was launched in 2016, starting in Western-Kenya. The project aims to improve quality of care of existing physical rehabilitation services. The Physio-Rehab Project aims to make resources available by providing clinics with affordable loans. Clinic owners get the opportunity to improve the quality of the clinic by purchasing the right equipment, appliances and making necessary changes to the clinic. Before loan disbursement KMET together with the business owner drafts a business and quality upgrade plan to set quality improvement goals to achieve throughout the loan tenure. Additionally, business and quality training are given to the provider and loans are supplemented with continues monitoring and support.

Since the start we’ve been able to support 13 clinics and 6 more will be supported in 2018. KMET has monitored and coached the clinics in order to achieve the best possible results. In the first two years we saw an average quality improvement of 18%, mostly in the fields of organizational planning, patient management and patients’ rights and care process. Some challenges with loan repayments were observed due to insurance companies struggling to refund treatment and political unrest. Increasing access to affordable loans and integrating quality of care into physical rehabilitation clinics appears to contribute to improvements on quality, safety and efficiency of physiotherapy services. Nonetheless we do see some challenges in the sustainability of achieved results. We aim to address this issue and achieve more long-lasting impact in quality of care.
Pamela Chandiwana, Biomedical Research and Training Institute
Poster Number: 182

The political economy of results-based financing: examining the experience of the health system in Zimbabwe

Co-authors: Pamela Chandiwana-Biomedical Research and Training Institute; Sophie Witter-Queen Margaret University, Edinburgh; Mildred Pepukai-Biomedical Research and Training Institute

Background
Results based financing (RBF) has proliferated in low and middle-income settings, and particularly in fragile and post-crisis/conflict contexts, in the past fifteen years. There is a small but growing body of evidence of its effectiveness and an increasing attention to understanding its mechanisms of change and impact on health systems, but very little attention paid to the political economy of its adoption, adaption and implementation, in part because most stakeholders have vested interests. This study begins to fill this gap by examining the experience of Zimbabwe, which since 2011 has adopted and scaled up a national RBF programme.

Methods
The research is based on a document review and 30 key informant interviews conducted at national, provincial and district levels, including development partners, government officials, implementers and local authorities. The interviews were conducted in February 2018 and both documents and interviews were analysed using a political economy framework.

Results
The study highlights the importance of how policies are framed in relation to local priorities, as well as divergent narratives on initial acceptability of RBF. The history of the economic crisis played a dominant role in the policy’s adoption, with resource gaps a key driver, alongside donor distrust of government systems. The health system did however retain a legacy of effectiveness which allowed for negotiation around how RBF was operationalized in Zimbabwe. The RBF approach has taken root, shifting institutional relationships particularly in terms of facility autonomy, but has been modified to respect existing health system structures. It remains vulnerable as it continues to be largely externally financed.

Conclusions
The case study illustrates the importance of understanding the incentives, institutional positions and ideology that affect the uptake and adaptation of health policies such as RBF, and how these are in turn influenced by the implementation of these policies. Zimbabwe exhibits features of fragility but also strong residual capacity and resilience. This makes the story of RBF in Zimbabwe important to understand and share to improve the dynamics and practices of RBF introduction and implementation, for governments and development partners alike.
Viable health insurance for the rural poor in Africa: experimenting a new model beyond the limits of community health insurance

Co-authors: Paul Bossyns-Belgian Development Agency ENABEL; Ndeye Bineta Mbow-Manager of Departmental Health Insurance Unit Senegal; Fabienne Ladrière-Belgian Development Agency ENABEL

Purpose:

This implementation study shows that an alternative approach to community-based ‘micro’-health insurance (CBHI) is feasible and that health insurance for the rural poor and the informal sector is not a mere dream.

CBHI has been experimented for decades in poor country settings with unconvincing results. International literature even calls to quit social insurance in poor countries, based on the observation that it creates a dichotomy in society: the relatively rich and civil servants are insured and have financial access to care whilst the poor and informal sector are left behind. But when the principles of CBHI of ‘volunteer-based, private-owned, voluntary adhesion’, ‘small scale’ and ‘autonomy’ are replaced by professionalised, public, large-scale and government-subsidised health insurance the dynamics change drastically.

The conceptual model was experimented over the past 3 years in Senegal and showed that health insurance under such conditions is feasible in poor settings with viable and sustainable results. The study also demonstrates that health insurance in isolation will not result in UHC. Other systemic aspects need to be addressed in complement with assuring financial access.

Focus - Technical Content:

In 2 departments in Senegal, totalling nearly 500,000 inhabitants in 4 health districts, 2 professional health insurance units were created. A team of 4 personnel was engaged to organise a professionalised health insurance at the scale of a department. In parallel of this initiative, the government engaged in paying half of the adhesion fees (7500 f CFA out of 15000 for an adult per year) and a new fee-paying system was introduced in the health districts (flat fees) to fight against commercialisation of care. A village-based adherence initiative, contrary to individual adherence, proved very successful. Parallel government free health care initiatives actually discouraged people to adhere to the health insurance scheme.

Results - conclusion

Barely 2 years later, the initiative resulted in a penetration rate of 29% for a population of 500,000 inhabitants (&lt;4% in CBHI in far smaller populations). Out-of-pocket expenditure was reduced with &gt;85% for care delivered at ‘primary and secondary care level’, including ambulance transport and all drugs and other consumables. Renewal rates were &gt;81% (compared with max 22% in CBHI). Health facilities increased their financial viability significantly. The HI units were financially viable when the penetration rate was above 25%. Without the 50% subsidies and the flat-fee payment scheme that increased transparency significantly, the same results could not be obtained.
Unraveling PBF effects beyond impact evaluation: results from a qualitative study in Cameroon

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Introduction: Performance-Based Financing (PBF) has acquired increased prominence as a means of reforming health system purchasing structures in low- and middle-income countries. A number of impact evaluations have noted that PBF often produces mixed and heterogeneous effects. However, most evaluations heavily rely on quantitative methods which are not sufficient to explain the mechanisms through which PBF produces changes and so far little systematic effort has been channeled towards understanding what causes of heterogeneity, including looking more closely at implementation processes.

Aim and methods: Our qualitative study aimed at closing this gap in knowledge by attempting to unpack the mixed and heterogeneous effects detected by an existing quantitative impact evaluation in Cameroon to inform further implementation as the country scales up the PBF approach. We collected data at all levels of the health system (national, district, facility) and at the community level, using a mixture of in-depth interviews and focus group discussions. We combined deductive and inductive analytical techniques and applied analyst triangulation.

Results: We found that changes in health service delivery were bolstered by the increased availability of resources and by the setting of clear, attainable targets for health workers and managers. The heterogeneity could be explained not only by pre-existing health system factors (e.g. rigid policies and protocols, reliance on user charges, shortcomings in terms of infrastructure and personnel), but also by challenges related to the implementation of the PBF program itself (e.g. limited financial literacy, lack of explicit pro-poor targeting strategy, etc.). Health workers reported greater capacity to produce services that could be delivered at the community level (e.g. vaccination) compared to those requiring clients to come to the facility (e.g. delivery), suggesting that geographical and financial barriers represent an important obstacle even in the context of PBF programs.

Conclusions: PBF's ability to generate change appears to be closely linked to the program's ability to adjust implementation plans to existing health systems and to execute the program in a more fluid manner. In light of Cameroon's commitment to scaling up PBF, it follows that substantial efforts should be made to overcome these organizational, infrastructural and demand-side barriers and to smoothen implementation processes thus enabling healthcare providers to use PBF resources and management models to a fuller potential.
Coping with health care costs for chronic illness in low- and middle-income countries: a systematic literature review

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Background

Financial risk protection is a core objective of health systems strengthening in low- and middle-income countries (LMICs), but its measurement is challenging. Most existing estimates of financial risk protection fail to account for strategies that households use to cope with out-of-pocket (OOP) payments for healthcare, such as borrowing money or selling assets. These can have detrimental long-term effects, for example when loans need to be repaid. This is particularly relevant for chronic illnesses which require consistent, long-term OOP payments to the health system. We systematically review the literature on the range of strategies employed for financing OOP costs of chronic illnesses in LMICs, their determinants, and the long-term social, financial and health impacts.

Methods

We searched MEDLINE, EconLit, EMBASE, and Global Health and one multi-disciplinary database, Scopus, for literature published in English on or after 1 January 2000. We included qualitative or quantitative studies describing at least one coping strategy for dealing with chronic illness OOP payments in a LMIC context. Our review used a narrative synthesis approach and followed PRISMA guidelines.

Results

Forty-one papers met our inclusion criteria (cross-sectional surveys (n=27), longitudinal studies (n=5), qualitative studies (n=7), and mixed-methods studies (n=2)). Studies provided evidence of coping strategies for chronic illness costs that are not traditionally included in financial risk protection research (e.g. taking children out of school or sending them to work, reducing expenditure on food, education or social activities, institutionalising a patient, taking on extra work, quitting work to give care, or moving to cheaper or free accommodation). Eighteen studies investigated determinants of coping strategies and suggested that poorer households and those at more severe stages of disease are more likely to engage in potentially detrimental coping strategies. Only five studies included evidence of impacts of coping strategies on patient households, including increased labour to repay debts, discontinuing treatment, and depleting savings. However, these were cross-sectional studies and longitudinal research is required to better understand the longer-term effects of coping with OOP costs for chronic illness.

Conclusion

There is little research describing different types of coping strategies for OOP payments for chronic illnesses, their determinants and the long-term impacts on households. Our review identifies coping strategies not normally captured by financial risk protection research. Qualitative and longitudinal research are needed to inform ways to support vulnerable groups and more comprehensively monitor financial risk protection for chronic illness, particularly in LMICs under-represented in health systems research.
A quasi-experimental assessment of the effect of a decision-support system and performance-based incentives on client satisfaction with maternal health services in northern Ghana.

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Computerized decision support system (CDSS) and performance-based incentives (PBIs) have a potential to contribute to clients' satisfaction with maternal health services. However, rigorous evidence is lacking on the effectiveness of these strategies in developing countries such as Ghana. This study aimed to determine the effect of CDSS and PBI on clients' satisfaction with maternal health services in northern Ghana.

The study employed a quasi-experimental controlled baseline and end line design with an explanatory mixed-methods model to assess the effects of the two interventions on client satisfaction with maternal health services. The quantitative research component consisted of a controlled pre-post-test design, which allowed quantitative measurement of client satisfaction with care. To obtain explanatory descriptions of the effects of the interventions on motivation and performance of providers, 48 in-depth interviews were conducted in twelve health facilities in Kassena-Nankana and Buiisa districts at intervention end line. A difference-in-difference logistic regression analysis controlling for potential covariates compared variables across intervention and comparison facilities at baseline and end line. Nvivo version 10 was used to manage qualitative data.

CDSS and PBIs were associated with improvements in client satisfaction with maternal health services. Antenatal clients in the intervention arm at end line reported a statistically significant difference in their perception of providers' technical performance, client-provider interaction and healthcare providers' availability to provide care. Furthermore, delivery clients' satisfaction scores were significantly higher among intervention healthcare facilities for technical performance, client-provider interaction, healthcare provider availability and overall satisfaction with delivery services. Qualitative findings supported quantitative findings.

CDSS and PBIs interventions positively affected antenatal and delivery client satisfaction with services. This short-term effect was shown within two years after implementing the interventions. Future research is required to evaluate long-term effects of these interventions on client satisfaction.
Leaving no one behind: Using Seasonal Calendar to help understand and address context complexities in Lymphatic Filariasis control programmes in Ghana.

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Background
Implementation of the Ghana Lymphatic Filariasis (LF) programme to eliminate LF started in 2001, with annual mass administration of Ivermectin and Albendazole as the main strategy. After 10 years of the programme 76 out of 98 districts achieved interruption of transmission by 2015. Twenty-two districts remained as LF “hot spots” because they have prevalence above the 1% threshold. This study highlights barriers and opportunities for implementing Mass Drug Administration (MDA) in communities with LF persistent prevalence, using participatory processes and engagement in order to develop more responsive and context appropriate strategies.

Methods
We utilized qualitative research methods, using Seasonal Calendar as the main participatory tool for the focus group discussions (FGDs). A total of 24 seasonal calendars in 34 FGDs were held in 16 communities. Participants were grouped by sex and age (15-24; 25-50). Communities were purposively selected from two “hot spot” regions in Northern and Southern Ghana. The selected method provided an opportunity to engage community members in exploring their views on population livelihood activities, seasonality and migration on Mass Drug Administration (MDA).

Results: MDAs occurred in the communities however this was normally when migration/mobility was at its peak especially among the men.

Livelihood activities especially illegal mining (Galamsey) associated with high levels of migration among young men occurred around the same period of the MDA.

In some communities, socio cultural activities such as festivals which involves merry making occurred just after the period of the MDA. Mostly the young men migrated out during the period of the MDA in search of money before the commencement of these festivals. A religious festival such as Eidyl Ftr associated with fasting occurred around the period of the MDA.

MDAs occurred around the wet season which is associated with high rates of rainfalls. Heavy rains around these period makes movement especially in rural communities difficult coupled with the Directly Observed Treatment (DOTs) method of drug distribution during MDAs difficult for Community Drug Distributers (CDDs).

Discussion/Conclusion: High levels of mobility/migration, livelihood activities, sociocultural activities and seasonality negatively impacted on community members access to the MDA. Planning and implementation of LF programmes should be bottom up with attention to community input in order to make it accessible to all. By drawing on participatory processes and engagement with communities more responsive health policies can be developed.
Measuring Kenya’s Progress towards achieving Universal Health Coverage

Co-authors: Edwine Barasa-KEMRI-Wellcome Trust Research Programme; Peter Nguhiu-KEMRI-Wellcome Trust Research Programme; Diane McIntyre-University Of Cape Town

Background: The inclusion of Universal Health Coverage (UHC) as a health related sustainable development goal has cemented its position as a key global health priority. This has necessitated efforts to measure and track country progress towards the attainment of UHC. We aimed to develop a summary measure of UHC for Kenya and track the country’s progress between 2003 and 2013.

Methods: We adapted the World Health Organization (WHO) and World Bank framework for measuring UHC. We developed a summary index for UHC by computing the geometric mean of indicators for the two dimensions of UHC, service coverage, and financial risk protection. We run Monte Carlo simulation with 10,000 iterations to compute 95% confidence intervals for the summary measures, and to assess the sensitivity of these measures to our indicator weight assumptions. The service coverage indicator was computed as geometric mean of preventive (four or more antenatal visits, full immunization, condom use, family planning) and treatment (delivery by skilled birth attendant, appropriate treatment of diarrhoea, treatment for acute respiratory infections (ARI), hospital admission) indicators, while the financial protection indicator was computed as a geometric mean of an indicator for the incidence of catastrophic healthcare expenditure, and an indicator the impoverishing effect of healthcare payments. We analyzed data from three waves (2003, 2007, 2013) of two nationally representative household surveys. Service coverage data was obtained from the Kenya Demographic and Health Survey, while financial risk protection data was obtained from the Kenya Household Expenditure and Utilization Survey.

Findings: The weighted summary indicator for service coverage increased from 27.65% (27.13%-28.14%) in 2003 to 41.73% (41.34%-42.12%) in 2013, while the summary indicator for financial risk protection reduced from 69.82% (69.11%-70.51%) in 2003 to 63.78% (63.55%-63.82%) in 2013. Inequities were observed in both these indicators. The weighted summary measure of UHC increased from 43.94% (95%CI 43.48% - 44.38%) in 2003 to 51.55% (95%CI 51.29% - 51.82%) in 2013.

Conclusion: Both service coverage and financial risk protection indicators in Kenya remain low, translating to a low summary measure of UHC. This means that significant gaps exist in Kenya’s quest to achieve UHC. To accelerate Kenya’s progress towards the achievement of UHC, the country will need to significantly increase public spending in healthcare, reduce dependence on out of pocket payment by scaling up prepayment health financing, and move from passive, to strategic purchasing of healthcare services.
Where are we in UHC in Africa?

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Background

The Millennium Development era brought together resources globally, particularly in support of prevention and control of communicable diseases and significant progress was made in the sub-Saharan countries. Although a few countries attained some of the health Millennium Development Goals (MDGs), it is clear that unless the rate of progress is enhanced, most countries in the region would not be able to attain the sustainable development goal 3 (SDG3) targets. The major reason for countries not attaining their health MDGs is weak health systems. To achieve the SDG3, it is critical to attain universal health coverage (UHC) which can only be achieved through strengthened health systems that are able to deliver quality health care and services to the people without leaving anyone behind.

Methods

A systematic review of available literature through peer reviewed articles was undertaken on health service coverage in countries in sub-Saharan Africa in addition to Millennium Development Goals reports and the Global health database. Analysis of trends of health service coverage was done alongside health system indicators.

Results

Significant progress was made in sub-Saharan countries during the MGD era and improvements in intervention coverages and health status were registered. However, there remained glaring inequities, unsustained gains, and poor resilience to shocks as was seen in West Africa during the Ebola Virus Disease epidemic. Even where coverage was high, often the quality of care was below standard. Most of the countries in the region will not attain the SDG3 if they continue on the current trend. In the WHO African Region, a new Actions Framework to strengthen health systems for UHC and SDGs has been developed and offers an opportunity to guide country efforts to move towards UHC.

Conclusion

African countries made significant progress thusfar but significant gaps in terms of inequity, quality, affordability and sustainability remain. Although countries are not likely to achieve Universal Health Coverage to attain the SDG3 if their health systems are not strengthened, the Regional Actions Framework for strengthening health systems for UHC and SDGs gives an opportunity for countries to make the necessary leap.

Key words: health systems, health coverage, equity, quality
Suhana Begum, Camden and Islington Public Health
Poster Number: 190

Working with the local community on a system-wide approach to obesity

Co-authors: Lana Simpson-Camden and Islington Public Health; Suhana Begum-Camden and Islington Public Health; Leila Reid-Camden and Islington Public Health; Jason Strelitz-Camden and Islington Public Health

Background

St Pancras and Somers Town (SPST) is a densely-populated, economically deprived area in Camden, London. High rates of obesity and diabetes are just two contributors to poor health outcomes. The 2007 Foresight report and 2015 review of Camden’s approach to tackling childhood obesity both recommended a preventative and system-wide approach. The SPST Partnership is a three-year programme aiming to build understanding of local barriers and facilitators to a healthy lifestyle from the local community perspective and to collaboratively identify how local assets can be leveraged to support healthier lifestyles.

Methods

A mixed methods cross-sectional design was used. Residents took part in focus groups (n=57) and semi-structured interviews (n=8) conducted by the research team and surveys (n=108) administered by community researchers. Pupils (n=20) took part in school workshops and parents (n=16) took part in feedback sessions in two primary and one secondary school. Surveys asked about current healthy lifestyle habits and views on making changes. Focus groups explored barriers and facilitators to a healthy lifestyle, focusing on diet, physical activity, mental wellbeing and the local area. Semi-structured interviews based on the COM-B model explored capability, opportunity and motivation towards health behaviour change. Thematic analysis was utilised to inform a series of ‘insights’: the key local factors driving obesity in the area and how these can be redressed.

Results

Twelve insights describing drivers to obesity were identified, grouped under food availability and consumption (such as the absence of active marketing and promotion of healthy foods), physical activity and the environment (such as the demand for more food growing opportunities) and socio-cultural influences and behaviour (such as aspects of the local food culture promoting unhealthy food choices). Recommendations were made for each insight, focusing on the role of the community, residents, the NHS and Council in shifting the environment including increasing local availability of fresh produce and increasing the sense of ownership over local green spaces. The data was used to inform the design of the programme of activities to support residents in taking up a healthy lifestyle to be delivered.

Discussion

This study identified twelve insights describing factors influencing obesity from the perspective of local residents. Environmental cues to eating behaviour were identified and recommendations made for local planning. By capturing local residents’ views using a community-centred approach, interventions targeting the environmental and behavioural factors residents feel would support them to take up healthy lifestyles can be developed.
The role of citizens in health worker staffing

Co-authors: Rose Ndolo-World Vision UK; Daniel Muhinja-World Vision Kenya

Purpose: World Vision used a social accountability approach, Citizen Voice and Action, (CVA) to support citizen social audits of health staffing at local health clinics in Turkana County, Kenya, where there was a substantial shortage of health workers.

Objectives and Methods: The CVA approach entailed the provision of civic education on government standards and a platform to engage with local government. Using document review, focus group discussions and key informant interviews to develop a case study, World Vision demonstrated the role of citizen influence in successfully lobbying the County government for increased staffing.

Results and findings

- A lobbying campaign by citizens for increased staffing based on their social audit findings helped citizens successfully lobby for an increase of 98 additional staff.

- The CVA approach empowered local communities to demand their entitlements to basic health services and secure improved health services.

Lessons to date: Effective orientation on social accountability for government stakeholders and communities was crucial to address potential misconceptions of the approach and ensure non-confrontational dialogue between communities and government.

Value added and intended impact

- CVA equipped local leaders and citizens with a simple, effective approach for continued monitoring of health services delivery against government’s own standards, thereby strengthening local accountability mechanisms.

- Social audits by citizens provided compelling evidence to support citizens to make their case to government.

- Civic education on government service standards for health staffing in specific facilities was critical to empowering citizens to take action.

Conclusion: Citizens have an authentic unique role to play in health systems strengthening.
ARIANNA MAEVER AMIT, UNIVERSITY OF THE PHILIPPINES MANILA  
Poster Number: 192

Prioritizing Maternal and Child Health through Paid Maternity Leave Policies in the Workplace: A Scoping Review

Co-authors: ARIANNA MAEVER LORECHE AMIT-UNIVERSITY OF THE PHILIPPINES MANILA; AMELYN ASENCÉ-UNIVERSITY OF THE PHILIPPINES MANILA; JOHN EDLOR JURADO-UNIVERSITY OF THE PHILIPPINES MANILA; CARL ABELARDO ANTONIO-UNIVERSITY OF THE PHILIPPINES MANILA

A. Background: Paid maternity leave is one of the vital public policies for promoting maternal and child health. The aim of this scoping review was to synthesize evidence regarding such entitlements, focusing on the benefits, risks, costs, and barriers.

B. Methods: We conducted a scoping review of literature following the methodology of the Joanna Briggs Institute. We carried out the search in MEDLINE/PubMed, Scopus, and ProQuest to obtain all relevant peer-reviewed articles published from January 2000 to January 2017 that reported paid maternity leave for female workers in both public and private sectors across low-, middle-, and high-income countries.

C. Results: We screened a total of 572 records, of which 101 were deemed relevant and eligible in the assessment. There is a growing number of studies that focus on maternity leave policies and their benefits to women and their infants, as well as to employers and the economy. For mothers and infants, studies have reported that maternity protection has a significant positive contribution to breastfeeding, maternal-infant attachment, work-life balance, mental health, fertility status of women, and decreased infant mortality. While some employers view paid parental leave policies as costly, working mothers who are offered such are found to be more likely to return to their work postpartum. In spite of these benefits, extended leave entitlements may still pose a hazard to women's career and earning potentials such that career prospects of working mothers are better with an earlier return to work. Furthermore, maternity benefits draw criticisms from employer organizations because of incurred costs of employing temporary replacements.

D. Conclusions and Recommendations: Not only are there persistent differences in wages between men and women, disparities in the implementation, access and utilization of maternity leave entitlements across countries and workplace settings remain. In this regard, paid maternity leave policies should recognize the health benefits to and needs of both mother and child alongside economic and management concerns. We found little evidence regarding the impact of such policies on infant risks, fertility, and childbirth. We suggest that more studies explore these aspects and outcomes in relation to maternity leave.

E. Keywords: maternity leave, working women, workplace

As of submission, this project has been presented in the 49th Asia-Pacific Academic Consortium for Public Health Conference and accepted for poster presentation in the upcoming 20th National Institutes of Health Anniversary – University of the Philippines Manila.
Measuring Progress Toward SDGs: the Maternal and Newborn Content of Routine Health Information Systems

Co-authors: Emma Williams-Maternal Child Survival Program (MCSP); Barbara Rawlins-MCSP; Kathleen Hill-Maternal Child Survival Program (MCSP); Edward Kenyi-MCSP; Tanvi Monga-Maternal Child Survival Program (MCSP); Yordanos Molla-Maternal Child Survival Program (MCSP)

Background:
The Sustainable Development Goals (SDGs) call for an end to preventable maternal and newborn deaths. Strengthening health systems and improving quality of care in health facilities are essential strategies to avert deaths. Access to information about local health system performance is critical for health system strengthening efforts.

Methods:
We collected antenatal care (ANC), labor and delivery (L&D), and postnatal care (PNC) health facility registers and monthly summary reporting forms from 24 low-resource countries in sub-Saharan Africa and Southeast Asia prioritized by the United States Agency for International Development (USAID) for maternal newborn health (MNH) support. Using a standardized data abstraction form, technical experts reviewed each register and reporting form to check for the presence of more than 200 data elements related to provision of high-impact MNH interventions, including health promotion, prevention, screening and management of obstetric and newborn complications, as well as maternal and perinatal health outcomes. Working with in-country experts, we completed data quality checks. Findings summarize the percentage of country ANC, L&D and PNC registers and reporting forms that capture specific prioritized MNH data elements.

Results:
All countries document combined maternal and newborn deaths and live births in facility registers and summary forms; however, only 54% of summary forms had information on maternal cause of death and 21% for newborn cause of death. We found that 14/24 countries tracked occurrence of fresh stillbirths, a quality of care L&D indicator. Data points on incidence of specific maternal and newborn complications were available in less than half of countries, except for low birth weight (75%).

Availability of data elements for high-impact ANC, L&D and PNC evidence-based interventions varied. Tracking of some key antenatal care indicators was as follows: iron-folate supplementation- 63%, tetanus toxoid second immunization -71%, syphilis screening -58%. While 54% of the countries’ reporting forms track immediate breastfeeding, only 6 countries track provision of neonatal resuscitation. Postnatal care registers and reporting forms had the less detail on services and counseling and instead tended to record mainly utilization of services.

Conclusions:
This review demonstrates important gaps and opportunities to strengthen availability of essential routine MNH data in local health information systems. Local communities, front-line health workers and district managers urgently need essential routine MNH information to track and accelerate progress toward SDGs related to preventable maternal and newborn deaths.
Poster Abstracts

Kate Gilroy, Maternal and Child Survival Program/JSI
Poster Number: 194

Child health and nutrition: What data is available in routine Health Information Management Systems in 23 countries?

Co-authors: Kate Gilroy-Maternal and Child Survival Program/JSI; Emily Stammer-Maternal and Child Survival Program/JSI; Elizabeth Houari-Maternal and Child Survival Program/JSI; Tamah Kamlen-Chemonics

Background: Most low and middle-income countries use data from health management information systems (HMIS) to manage and monitor child health and nutrition programs on a routine basis, as large-scale surveys are only conducted periodically. There is currently limited international guidance on child health indicators within HMIS, especially at the facility level, and countries’ systems and child health and nutrition indicators are known to vary.

Methods: The USAID global flagship Maternal and Child Survival Program (MCSP) conducted a review of the child health and nutrition data elements collected in 23 low and middle-income countries’ national HMIS to identify commonalities and gaps. For each country, we collected national HMIS facility registers and summary forms, as well as patient forms, registers and reporting forms from community health information systems. A standardized extraction template was used to record the data elements collected and reported on each form or register at each level.

Results: The review identified common gaps across countries, especially in reporting on case management of child illness. While most all countries report the number of cases of childhood illnesses seen (such as diarrhea and pneumonia), some do not report on the number of cases treated appropriately, even if the data are collected in registers. These gaps in reporting children treated are more pronounced at the facility than the community level. Outpatient registers deployed in a significant number of countries contain open-ended columns for the diagnosis and/or treatment given to sick children, rather than standardized codes or columns. Most countries track referral of sick children from the community to facility; fewer countries report on referred children received at a higher level. Data elements are not always standardized or collected consistently between the facility and community level.

Discussion: Standardized, high quality routine data are necessary for countries to manage and monitor child health programs—gaps in the availability (i.e. number of cases treated) and quality (i.e. non-standardized collection of source data in registers) of data can weaken program monitoring and management. The review findings can help country and global stakeholders understand what child health and nutrition data elements are available in each country’s routine HMIS to calculate key indicators and advocate for inclusion of high-priority indicators during HMIS reviews. The lack of standardization across community and facility levels and high variability in data elements across countries supports the need for more standard, international guidance for child health and nutrition indicators in routine HMIS.
Antoinette Bhattacharya, London School of Hygiene and Tropical Medicine
Poster Number: 195

**Advancing health systems for mothers and newborns through actionable routine health information systems: a case study from Gombe State, Nigeria**

Co-authors: Antoinette Alas Bhattacharya-London School of Hygiene and Tropical Medicine; Tanya Marchant-London School of Hygiene and Tropical Medicine

Background: Actionable routine health information systems have the potential to advance health systems for mothers and newborns through real-time monitoring of service delivery and coverage to enable course correction. In this study, we accessed District Health Information System, version 2 (DHIS 2) data for Gombe State, north-eastern Nigeria to present a case study of its quality to monitor priority maternal and neonatal health (MNH) indicators.

Methods: We mapped priority indicators referenced by the Ending Preventable Maternal Mortality and Every Newborn Action Plan to the data available in Gombe State’s facility-based data system. For all 615 primary and referral facilities included in DHIS 2, we assessed the data quality for these priority indicators for July 2016-June 2017 according to the World Health Organization data quality review guidance, focusing on completeness, timeliness, and internal consistency of data. We identified data quality metrics that were considered poor and identified opportunities for improvement.

Results: Gombe’s RHIS currently collects 12 of the 15 priority MNH indicators that can be monitored using facility-based data indicating high potential for real-time data informed system strengthening. Analysis of data quality metrics revealed priorities for strengthening this data platform. MNH data were regularly incomplete. The indicators for first antenatal visits and total deliveries were the most complete, reported in 71-78% of submitted reports, but indicators for postnatal care visits and skilled birth attendance were reported in only 29-34% of submitted reports. Metrics assessing the internal consistency of data demonstrated inconsistencies in over half of the priority indicators, limiting usability. Primary facilities were more likely to over-report and referral facilities more likely to under-report services delivered. Detailed examination suggested opportunities for improvement, for example through regularly reviewing the data for indicators that should have equal values to better understand gaps in service uptake or gaps in data quality related to data capture or reporting.

Conclusion: Effective health systems monitoring is dependent on good quality data platforms and many global initiatives, including for MNH, are looking to DHIS 2. This case study from Gombe State, Nigeria, demonstrates high potential for effective monitoring but also highlights the need for regular attention and maintenance of the platform to be optimized for good data quality and fitness for purpose.
Combating skewed sex ratio at birth in Haryana, India – Tracking and validating Civil Registration System data

Introduction: The state of Haryana had the lowest sex ratio at birth (SRB) in India as per census 2011. The government introduced its flagship multi-sectoral campaign, Beti bachao, Beti padhao, in 2015 for survival, healthy development and empowerment of girls. The community mobilization is done by Department of Women and Child Development, enrollment and retention in schools by Education department while the Health Department has been working for strict implementation of Pre-conceptional and Pre-natal diagnostic Techniques Act 1994. Sex ratio at birth is being used as an indicator for monitoring programmatic outcome.

Methods: In collaboration with the Haryana government, USAID supported Vriddhi project is following up monthly data for births registered by Civil Registration System (CRS). The district reports submitted are being validated with the records at the birth registration units which are used for compiling reports. In each district, 60% of the births registered in 2016 were validated. For this the reporting units in Municipal Corporations (urban) and Community/Primary Health Centres (rural) with high registration are selected. The validation was done in 102 reporting units in 21 districts covering 65.6% of births in these districts.

Results: Nearly 89% of the expected births in the state of Haryana were registered by CRS in 2016. The SRB as per CRS data for the year 2014, 2015 and 2016 is 871, 876 and 900 respectively. The reported SRB for selected reporting units in 21 districts was 895 while the validated SRB was 892. In 12 districts the validated SRB was higher for the select reporting units while in 9 districts it was lower against reported SRB. The district wise variation in SRB was in the range of 1-23 points. While 11 districts had variance of 1-5 points, 7 reported a variance of 6-15 points and 3 more than 20 points variance in SRB. The variance was due to manual errors and lack of uniform recording/reporting processes and lack of adequate skilled manpower. Based on these findings regular monthly meetings of the District authorities were initiated and birth registration process guidelines and standardized documentation processes were introduced.

Discussion: Increasing institutional delivery (82%) and political push for both birth registration and unique identification for newborns, has improved the number of births registered. CRS validation helps to improve governance by identifying district specific gaps and tracks progress. Corrective measures are being taken for stringent implementation of PCPNDT Act in poor performing districts.
Record keeping – a fundamental component for improving quality of maternal care and data driven decision making: Findings from 15 public health facilities of Bangladesh

Co-authors: Mohiuddin Ahsanul Kabir Chowdhury-International Centre for Diarrhoeal Diseases Research, bangladesh (icddr,b); Farhana Karim-International Centre for Diarrhoeal Diseases Research, bangladesh (icddr,b); Abdullah Nurus Salam Khan-International Centre for Diarrhoeal Diseases Research, bangladesh (icddr,b); Nabila Zaka-UNICEF; Alexander Manu-University of Liverpool; Shams El Arifeen-International Centre for Diarrhoeal Diseases Research, bangladesh (icddr,b)

Background: Proper documentation of clinical services is an utmost necessity to establish a model for quality of health care. Clinical records can be considered as the basic tools which are essential for effective communication and good clinical care. However, the importance of the documentation or record keeping is often under recognized, poorly maintained and not readily available. The paper depicts the status of record keeping for the care during time around birth in primary and secondary level public health care facilities of Bangladesh.

Methods: The study has been conducted in 3 district hospitals (DH) and 12 sub-district hospitals (UHC) of Northern Bangladesh utilizing quantitative cross sectional study design. A record review form comprising 3 components, partograph maintenance, spontaneous vaginal delivery, and Caesarean section, was developed as the data collection tool through a tool development workshop. The data collectors, being extensively trained on the tool, reviewed the records for the months of March through June 2016 and the extracted data underwent descriptive statistical analysis. Ethical approval was obtained from the Institutional Review Board (IRB) of icddr,b.

Results: In total, we reviewed 2,323 records of which 2,173 (93.5%) were of the patients of spontaneous vaginal deliveries and 150 (6.5%) were of caesarean section deliveries. Of those records, 592 (25.5%) were from DHs and the rest were collected from UHCs. The often recorded (>80%) indicators included age, gravid status, parity, type of delivery, health outcome of newborn with birth weight, and especially for C/S, name of surgeon and type of anaesthesia. However, there are some indicators which had been rarely recorded (<10%), such as, history of chronic diseases, pre-discharge summary, partograph, operation note, indications for CS and advice for newborns. Mothers gestational age, ANC visits status, presentation, lie, maternal health outcome etc. were noted sometimes (10-80%). Partograph was not documented in any of the cases reviewed in the study. Overall, the record keeping system seemed better in the UHCs in comparison to DH.

Discussion: In general, poor documentation of the records was evident that seems to be a major obstacle to establish quality care since the monitoring and supervision is hampered by this poor practice. The findings of this study suggest that there is scope of improvement in record keeping in health sector of Bangladesh to ensure quality of care. The current study should help to design the interventions to improve the documentation process with an ultimate goal to improve quality of care.
Cost-savings through termination of parallel implementations of multiple home-based records for maternal and child health: A case study in Vietnam

Co-authors: Hirotsugu Aiga-Japan International Cooperation Agency (JICA); Pham Huy Tuan Kiet-Hanoi Medical University; Vinh Duc Nguyen-Ministry of Health, Vietnam

Background:
In Vietnam, there are three major home-based records (HBRs) for maternal and child health (MCH) that have been already nationally scaled up, i.e. Maternal and Child Health Handbook (MCH Handbook), Child Vaccination Handbook and Child Growth Monitoring Chart. The MCH Handbook covers all the essential recording items that are included in the other two. This overlapping of recording items between the HBRs is likely to cause inefficient use of both financial and human resources. This study is aimed at estimating the magnitude of cost savings that are expected to be realized through implementing exclusively the MCH Handbook by terminating the other two.

Methods:
Secondary data were collected at the Vietnamese Ministry of Health and the Office of the Project for Implementing Maternal and Child Health Handbook for Scaling-Up Nationwide. The data were analyzed in terms of recurrent costs of HBR operations (i.e. HBR production and distribution costs, and health workers’ opportunity costs). Through multiplying the unit costs by their respective quantity multipliers, recurrent costs of operations of three HBRs were estimated. Moreover, magnitude of cost savings likely to be realized was estimated, by calculating recurrent costs overlapping between the three HBRs.

Results:
It was estimated that implementing exclusively the MCH Handbook would lead to cost savings of USD 3.01 million per annum. The amount estimated is minimum cost savings, because only recurrent cost elements (HBR production and distribution costs and health workers’ opportunity costs) were incorporated into the estimation. Further indirect cost savings could be expected through reductions in health expenditures, as the use of MCH Handbook would contribute to prevention of maternal and child illnesses by increasing continuum of care (e.g. antenatal care, facility-based delivery, post-natal care, exclusive breastfeeding, child immunization and child growth monitoring).

Discussion/conclusions:
To avoid wasting financial and human resources, the MCH Handbook should be exclusively implemented by abolishing other two HBRs. The amount to be annually saved (USD 3.01 million per annum) is equivalent to be 6.7 years’ worth of production and distribution costs of the MCH Handbook. This evidence serves as the convincing financial justification for nationwide scaling up of the MCH Handbook. This study is a globally initial attempt to estimate cost savings to be realized through avoiding overlapping operations between multiple HBRs for MCH.
Health Systems Research: A Precursor to Evidence Based Collaborative City Health Planning in Urban India

Co-authors: Shahab Ali Siddiqui-Bal Raksha Bharat (Save the Children, India); Rajesh Khanna-Bal Raksha Bharat (Save the Children, India); Benazir Patil-Bal Raksha Bharat (Save the Children, India)

Background
Rapidly expanding urban poor population offers complex challenges of vulnerabilities resulting in adverse health outcomes. Public Health (PH) provisioning in urban slums is mostly unstructured, fragile and with minimal outreach. Service utilization too is compromised owing to issues of accessibility, affordability, quality and delayed care seeking. Government's Urban Health Mission focuses on strengthening PH system to ensure quality services for urban poor. Lack of formative information and disaggregated data is hampering responsive policies and programming.

Methods
Save the Children India undertook a cross-sectional study using mixed methods research design for quantitative and qualitative data collection to understand community needs and behaviours; demand, supply and enabling factors affecting care seeking; and health system preparedness for delivery of required services, in two cities with million plus population (Pune and Bhubaneshwar). Qualitative study included Transect Walk (20 slums), FGDs (n=26), IDIs (n=44), case studies (n=7) whereas quantitative included household survey with RDWs (n=592), facility assessment (n=19). Data was anonymized and was analysed using Epi-data 3.0 and SPSS 11. Qualitative data was coded and thematically analysed using MS Excel. Social-cum-resource maps were studied to understand the distribution of resources and sociodemographic spread.

Results
Findings present a picture of an emerging health system, with nascent primary and secondary level and an evolved yet overburdened tertiary level. This picture is mirrored in client perception and care seeking. At Community Level perception about Primary and Secondary Level services is poor. Care-seeking in post-natal period is quite low (Pune-50% RDWs, Bhubaneswar-16% RDWs). At Primary & Secondary Level there is fragmented service provision, underutilization of services, shortage of HR, limited training opportunities, lack of clarity in roles of front line workers (FLWs). Only 26% of Recently Delivered Women (RDWs) were accompanied by FLWs for delivery care. At Tertiary Level though facilities are overburdened, service quality is compromised, availability of essential drugs is staggered and scope for expansion is limited yet these facilities are held in high regards. 40% of the (RDWs) preferred district hospitals. There are no formal interlinkages between various levels of health systems. Only 9% RDWs used government ambulances. Based on the evidence generated from the study, guidance of Technical Advisory Group and other stakeholders, a collaborative multiyear City Health Plan was developed.

Conclusion
Development of a City Specific Multiyear Health Plan based on study findings can serve as a sustainable planning process for bringing in quality, equity and dignity in health services for urban poor.
Stakeholder Engagement and Buy-in for Implementation of eMIS Initiatives in Bangladesh

Co-authors: Reza Ali Rumi-icddr,b; Suman Kanti Chowdhury-icddr,b; Md Humayun Kabir-MEASURE Evaluation

Purpose
Bangladesh's success in reducing the total fertility rate (TFR) from around 7 in the 1970s to 2.3 in the early 2010s owes much to the policies and programs adopted since independence in 1971. However, population growth has almost plateaued and achieving further reduction or replacement level would require overcoming many challenges including improving public sector health service delivery through innovative mechanisms. The video titled “Towards Complete Digitization” depicts the stakeholders’ view regarding implementation of an electronic Routine Health Information System (RHIS), called electronic Management Information System (eMIS) initiatives in Bangladesh.

Contents
The Directorate General of Family Planning (DGFP) under the Ministry of Health and Family Welfare is responsible for family planning services in rural areas. It has community health workers (CHWs) who go door-to-door for providing family planning services. They also collect data on use of family planning methods, maternal and child care etc. The government has a digital vision based on information and communication technologies, which the DGFP seeks to follow.

Four implementing partners (IPs) of USAID have provided technical assistance to the DGFP for implementing eMIS since 2015. A comprehensive system has been developed which is interlinked both vertically and horizontally and allows data sharing between the CHWs and facility-based providers. Paper registers were converted into mobile applications (app). Reporting forms were digitized. Data visualizations were created for health managers (sub-district and district) and decision-makers at central level.

Stakeholders were engaged from the beginning of eMIS implementation. They were sensitized initially and periodically at all milestones through dissemination meetings and seminars. Government officials participated individually and through committees, vetted contents and designs, reviewed training materials, supervised implementation and emphasized capacity building. The management identified the value of data driven work in order to take evidence-based decisions. The digitization was innovative but did not appear disruptive for the CHWs even though major reforms were initiated. After an internal evaluation of the system, the MOHFW/DGFP embarked on gradual roll-out across the country by allocating resources through the current health sector program (2017-2022).

Significance
During the implementation of the eMIS Initiatives, active engagement by all stakeholders, whether they were decision-makers, managers or rural CHWs, was ensured and, accordingly, there was ownership for the new tools. It helped to gain traction for reform. Without such engagement and buy-in, it would not have been possible to ensure a national roll-out of the eMIS initiatives within 3 years of its initial implementation.
Samy Ahmar, Save the Children
Poster Number: 201

Strengthening Health Information Systems in low-resource settings – learning from the Kasai Oriental province of the Democratic Republic of Congo

Co-authors: Samy Ahmar-Save the Children

The maternal, newborn, and child mortality statistics in the Democratic Republic of Congo (DRC) are extremely poor. The DRC is one of only six countries in the world responsible for half of all maternal deaths due to childbirth-related causes. Access to basic services is incredibly poor, and the quality of healthcare one of the worst in the world. Quite how bad the situation is however, no one really knows: health information systems (HIS) are notoriously patchy and unreliable, population estimates are continuously revised based on a 30-year-old census, and household-based surveys on access to health are rarely undertaken. As part of our integrated Maternal, Newborn & Child Health programme in the Kasai Oriental province of the DRC, we have engaged in HIS strengthening through a combination of evidence-based approaches. In particular, we are working with the Ministry of Health to mainstream a nationally developed health monitoring tool (Monitorage Amélioré pour Action au niveau décentralisé, or MAA) through health professionals in two provinces. We are also helping an accelerated rollout of a web-based HIS platform throughout the provinces to improve the timeliness, accuracy and reliability of health data for decision making. After 4 years of programme activities, we reflect on the effectiveness of these activities in strengthening HIS in this province of DRC, present the key learnings and explore some of the challenges faced and the key success factors.
Community Health Systems Catalog: The one-stop “shop” for community health information and trends across 25 countries

Co-authors: Kristen Devlin-JSI Research & Training Institute, Inc. (JSI); Kimberly Farnham Egan-JSI Research & Training Institute, Inc. (JSI); Tanvi Pandit-Rajani-JSI Research & Training Institute, Inc. (JSI); Elizabeth Creel-JSI Research & Training Institute, Inc. (JSI)

Many countries have lacked cohesive policies, strategies, and guidelines to harmonize community health programs, resulting in systems that are fragmented, poorly integrated with national health systems and unable to reach scale. Countries had limited access to global information to inform aligned strategies and community health program design and implementation. To fill this gap, JSI Research & Training Institute, Inc. (JSI), through the Advancing Partners & Communities (APC) project, launched the Community Health Systems Catalog in 2014. The Catalog is a one-stop ‘shop’ for information on community health policies and programs across 25 countries; previously, such guidance was scattered across documents and not globally available.

Given the Catalog’s popularity, APC expanded it in 2016-17 to capture new policies developed to support the Sustainable Development Goals, achieve universal health coverage, and better align community health systems. The Catalog’s website (https://www.advancingpartners.org/resources/chsc) provides detailed country profiles, cross-country data summaries, and a complete downloadable dataset. It has been used by researchers, policymakers, donors, program managers, and implementers operating in health systems across 120 countries.

Organized by the WHO health systems building blocks, the Catalog provides information about community health leadership and governance, human resources, information systems, supply management, and service delivery, including data on over 130 interventions across multiple health areas. The Catalog describes national community health worker (CHW) programs and highlights differences and trends in CHW scopes of service, supervision and reporting structures, coverage, selection criteria, and processes for data collection and training.

This presentation will share global and country data and trends on community health system interventions and models and demonstrate how the Catalog can be used to address key topics, such as: gaps in community health policy; different models for national community health programs and key health systems actors; and roles and responsibilities of community groups and civil society in advancing health.

Using data visualization, such as infographics and dashboards, the presentation will review pertinent findings, such as 22 countries integrate community health data into national health management information systems; at least 7 countries have programs that incorporate community-based financing schemes; and all 25 countries specify the role of community groups in community health.

Participants will leave this presentation with a better understanding of where community health systems currently stand, where they are headed, and what gaps should be addressed by local and global decision-makers.
Mohammad Kibria, MEASURE Evaluation/University of North Carolina- Chapel Hill

Poster Number: 203

Building interoperability between community health service statistics with logistics management information system in Bangladesh improves data quality, visibility and effective use

Co-authors: Mohammad Golam Kibria- MEASURE Evaluation/University of North Carolina- Chapel Hill; Md. Humayun Kabir- MEASURE Evaluation/University of North Carolina- Chapel Hill; Gabriela Maria Escudero- MEASURE Evaluation/University of North Carolina- Chapel Hill; Suman K Chowdhury- International Centre for Diarrhoeal Disease Research, Bangladesh

Purpose:

Having necessary health data readily available at every level of the health system contributes to better decision making, which ultimately leads to better health outcomes. Working toward this goal, Bangladesh transitioned its paper-based data collection system to an automated one, generating significant interest among stakeholders and creating opportunities for innovation in the health sector. Unfortunately, vertical programs that handle service statistics and logistics data adopted discrete electronic systems for data management and reporting. Data from these silos were inadequate for decision makers to assess the health system’s performance in their catchment areas. This session explores how Bangladesh dealt with this problem.

Focus/Content:

Under the Directorate General of Family Planning (DGFP), service statistics and logistics data are housed separately, rather than in a single data repository. Without reliable access to service delivery data, managers of the electronic logistics management information system (eLMIS) cannot make accurate forecasts for commodities. Similarly, without eLMIS data, service delivery managers struggle to understand the logistics of family planning supplies dispensed and services provided (for example, the number of contraceptive implants dispensed and the number of implant insertions reported, tracked against the number of implants removed).

To overcome this practical challenge, three United States Agency for International Development-funded programs—MEASURE Evaluation; the International Centre for Diarrhoeal Disease Research, Bangladesh (for field implementation); and the Systems for Improved Access to Pharmaceuticals and Services program—collaborated on a master facility list, service provider’s unique identification number, product code, and data structure mapping for the service statistics system and the eLMIS. The tools were linked, and interoperability was developed through a standard web application programming interface to ensure data flow. This followed a standard integrated health information architectural framework that allows the eLMIS to push transactional data to community-level service statistics software. This integration reduces paperwork and reporting time; enhances data quality; improves services; and promotes fine-grained data insights, better planning, accurate forecasting, early warning of contraceptives stockouts, and ultimately, cost-cutting.

Significance:

DGFP, MEASURE Evaluation, and SIAPS are staying on top of the changing landscape of interoperability through careful planning and smart partnerships and are confident that digital innovations can pave the way to a reliable and secure transfer of data. This high-demand interoperability guides the DGFP to foster efficiency, data transparency and use, and accountability. As the quality of the data used improves, so, too, will the quality and coordination of patient care.

Target Audience: Digital health experts, Donors, Managers.
Improving the generation, quality and use of data for routine immunization systems through the use of process indicators and other strategies


Background: The use of high quality routine immunization (RI) data is critical to service providers, managers, national governments, and partners aiming to achieve the goals of the Global Vaccine Action Plan (GVAP). USAID’s Maternal and Child Survival Program (MCSP) is facilitating cross-learning across its country programs about ways to improve RI data generation, quality, and use and encourage managers to use process indicators for real time decision making to improve immunization services. Methods: MCSP conducted a desk review of tools and documents and in-depth interviews with field-based staff in 11 MCSP immunization focal countries to understand the immunization data strengths and challenges that countries face and what strategies they have developed to overcome the challenges. Additionally, MCSP compiled a set of 10 “process indicators” measuring systemic factors such as frequency of vaccine stock-outs, presence of microplans, immunization sessions conducted, and frequency of supportive supervision. These indicators regularly provide health officials with useful information on the functionality of immunization systems. MCSP monitored these indicators for one year at the district level in Malawi, Nigeria, and Uganda and conducted in-depth interviews with health workers and district health staff about the indicators’ usefulness, feasibility, acceptability, and reliability. Results: All 11 countries reported facing similar data challenges, including unreliable data on target populations; frequent stock-outs of data collection tools; lack of training, understanding or motivation of staff on the importance of data; and staff shortages. MCSP country programs have developed and used a number of innovative strategies to address these problems, including data quality self-assessments and validation methods, supervision and mentoring approaches, and infant tracking methods or GIS technology to better estimate target populations and map catchment areas. The process indicators described improvements in RI systems in focal districts since the start of MCSP’s support in Malawi, Nigeria, and Uganda. Health workers expressed that the process indicators were useful for understanding system performance at a glance, generally easy to track, and sufficiently diverse to tell the “whole story” of the immunization system. However, respondents felt that the process indicators were underutilized because health workers did not have time to monitor them or appreciate their utility. Conclusion: MCSP country programs have identified a number of effective strategies and lessons learned for improving the generation, quality and use of routine immunization data, which can feed into tailored efforts to improve immunization systems.
UNDERSTANDING NON-COMMUNICABLE DISEASES: COMBINING ROUTINE SURVEILLANCE DATA WITH LOCAL KNOWLEDGE IN RURAL SOUTH AFRICA

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BACKGROUND: Non-communicable diseases (NCDs) are non-infectious, long-term conditions accounting for 40 million deaths annually. The majority of the burden is borne in low and middle-income countries where 87% of premature NCD deaths occur. The aim was to develop biosocial understandings of NCD mortality as part of a broader programme in a rural province, Mpumalanga, in South Africa focussed on generating and feeding back evidence of practical relevance in communities and health systems. METHODS: We combined routine mortality data with local knowledge on lived experiences of avoidable illness. Data were drawn from the PHEVA (Public Health Evaluation and Verbal Autopsy) and VAPAR (Verbal Autopsy with Participatory Action Research) programmes in the MRC/Wits Rural Public Health and Health Transitions Research Unit (Agincourt) and analysed in three stages: (a) analysis of levels, causes and circumstances of NCD mortality from quantitative Verbal Autopsy (VA) data; (b) analysis of community members’ perspectives on lived experiences of NCD mortality from qualitative community-based participatory research (CBPR); and (c) analytical integration of (a) and (b). RESULTS: NCDs accounted for 30% of all deaths in the surveillance site in 2014-15. The VA data also revealed multiple and reinforcing barriers to access: prohibitive overall costs of care, and, at or around the time of death, not calling for help, and not travelling to a facility (accounting for 27%; 37%; and 27% of all problems reported respectively). The CBPR provided rich detail on the mechanisms through which access was constrained including: poverty and lack of resources to sustain health, as well as to seek and receive care in acute situations; perceptions of poor quality care deterring presentation at clinics; and traditional beliefs characterising treatment and care seeking. VA data allowed the burden of NCD mortality to be quantified, revealed the extent of unaffordable care and how this may manifest in not calling for help and not travelling to facilities at the time of death. CBPR contextualised these barriers, providing detailed explanations of why they exist and providing important insights on risk exposure and accumulation over the life course. CONCLUSIONS: Extending routine data to account for the social processes of care seeking and utilisation, and including local knowledge on health and illness, gained through participatory processes that centralise lived experience and focus on health equity, can help to develop more complete renditions of complex health problems, foster inclusion in health systems, and provide more complete evidence to inform policies and programmes.
Global Palliative Care development: A systematic review of the most frequently used indicators for cross-national comparison. First step of the European Atlas of Palliative Care 2019.

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Background: Indicators assessing national-level palliative care (PC) development used for cross-national comparisons provide a broader view on the status of PC progress globally and health systems preparedness on living no one behind. Extensive work has been done on this area in the last decade using diverse indicators to address PC progress at a national level. We identified, collected and analyzed all existing indicators assessing national-level development of PC used for cross-national comparison in order to depict how international PC development has been assessed worldwide.

Methods: A systematic review using PubMed, CINAHL and Google Scholar was conducted with an additional Google search. Identified indicators were listed and categorized following dimensions of the WHO's Public Health Strategy (WHO’s-PHS) (services, use of medicines, policy and education). Within dimensions, indicators were clustered and then filtered according to frequency of appearance, assessed by number of times reported, leading to the selection of the most frequently used indicators.

Results: 48 studies assessing national level PC development and presenting cross-national comparison around the world were included. International PC development has been evaluated using 163 indicators (assessed through 475 different formulations: i.e. different names, units of measure or definitions). Of those, 43 indicators have been identified as the most frequently used in global studies. 37/43 (86%) correspond to dimensions of WHO’s-PHS (13 to services, 9 to policy, 10 to use of medicines and 5 to education). The other 6/43 (14%) fall in other complementary dimensions: research, professional activity and international cooperation. However, high reporting frequency shows that PC development has been mainly assessed by reporting on six particular indicators: Number of PC services per population (n=40), existence of PC national plan, strategy or program (n=25), existence of specialization in Palliative Medicine (n=22), existence of funding for PC (n=13), medical schools which include PC education in undergraduate curricula (n=13) and total use of opioids in morphine equivalents (n=9).

Conclusion: There is a clear reporting pattern addressing international PC development around the world. A set of indicators has been identified as the most frequently used. WHO’s-PHS appear as an accurate framework with most indicators falling within in its dimensions and only a few in complementary ones. Despite a solid evidence-based repository, the quality of the indicators remains to be studied and, subsequently, the list of indicators can be further narrowed. Global dialogue towards a consensus for best measuring national-level PC development is required.
Lisa-Marie Thomas, University of Aberdeen
Poster Number: 207

**Verbal Autopsy in health policy and systems: a literature review**

Co-authors: Lisa-Marie Thomas-University of Aberdeen; Lucia D'Ambruoso-University of Aberdeen; Dina Balabanova-London School of Hygiene and Tropical Medicine

Introduction: Estimates suggest that one in two deaths go unrecorded globally every year in terms of medical causes, with the majority of these occurring in low- and middle-income countries (LMICs). This can be related to low investment in civil registration and vital statistics (CRVS) systems. Functioning CRVS systems collecting data on morbidity and mortality will inevitably contribute to measuring progress towards goals such as Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs). Verbal Autopsy (VA) is a method that enables identification of cause of death (COD) where no other routine systems are in place and where many people die at home. Considering the utility of VA as a pragmatic, interim solution to the lack of functional CRVS, this review aimed to examine the use of VA to inform health policy and systems improvements.

Methods: A literature review was conducted including papers published between 2010-2017 according to a systematic search strategy. Inclusion of papers and data extraction was assessed by three reviewers. Thereafter, a thematic analysis and narrative synthesis was conducted in which evidence was critically examined and key emerging themes were identified.

Results: Twenty-six papers applying VA to inform health policy and systems developments were selected including studies in 15 LMICs in Africa, Asia, the Middle-East and South America. The majority of the studies applied VA in surveillance sites or programmes actively engaging with decision makers and governments. The value of continued collection of cause of death data using VA to establish a robust and reliable evidence base for health policies and programmes aimed to strengthen health systems was clearly recognised.

Conclusion: VA has considerable potential to inform policy, planning and the measurement of progress towards goals and targets. Working collaboratively at sub-national, national and international levels facilitates data collection, aggregation and dissemination linked to routine information systems. When used in collaborative partnerships between researchers and authorities, VA can help to close critical information gaps and guide policy development, implementation, evaluation and investment in health systems.

Keywords: Verbal Autopsy, cause of death, Health Policy, Systems research, population surveillance
Subnational and facility leadership: Drivers of maternal and perinatal death surveillance and response


Background: Maternal and perinatal death surveillance and response (MPDSR) systems are an important component of quality improvement strategies to decrease preventable mortality and strengthen the health system. From 2016-2017, USAID’s Maternal and Child Survival Program (MCSP) conducted an assessment on MPDSR implementation in four sub-Saharan African countries: Nigeria, Rwanda, Tanzania and Zimbabwe. The assessment examined elements of political commitment and leadership at sub-national and facility levels as these can either inhibit or facilitate the practice of MPDSR and strengthen local information systems and other health system functions.

Methods: We conducted a desktop review of key MPDSR-related national policies, guidelines, and tools prior to initiation of stakeholder interviews and site visits in each country. Across the four countries, trained data collectors conducted semi-structured interviews with over 41 key informants (national and sub-national, including policymakers and regional/district managers). Data collectors visited 55 health facilities, purposively selected because they had a history of practicing MPDSR, and conducted semi-structured interviews with managers and providers, reviewed documents for MPDSR processes, and assessed the implementation status of each facility’s MPDSR system using a standard scoring tool.

Results and discussion: Forty-seven facilities demonstrated evidence of practicing MPDSR and all had a specific person assigned to promoting death reviews. Of these facilities, 88% had clear leaders involved in establishing and championing death reviews. The two most commonly identified enablers among the facilities practicing MPDSR included teamwork and sub-national support of regional and district managers. In Tanzania, the participation of district coordinators in facility MPDSR meetings improved the quality of meetings and built capacity of facility staff. In Zimbabwe, the interdisciplinary nature of audit meetings was ensured by the strong facility leadership and demonstrated wider buy-in and ownership in the process. In Rwanda, all of the facilities assessed had MPDSR teams in place and most mentioned strong facility leadership as an important element of the process. In Nigeria, national and sub-national champions, especially professional associations, helped to build momentum for establishing and disseminating the new MPDSR policy. Leadership and supervision within a supportive environment were essential components to completion of the audit cycle.

Conclusion: Engagement from sub-national level promotes accountability and supports MPDSR practice at facility level through cross facility/district learning, capacity building on data use for decision making, and mentorship. Successful implementation of MPDSR requires leaders to champion the process and to access change agents at other levels to address larger, systemic issues identified through MPDSR.
Assessing the quality of the medical cause of death statistics in Ghana for the year 2015 using the Anaconda Tool

Co-authors: ANTHONY ADOFO OFOSU-GHANA HEALTH SERVICE; Dominic Atweam-GHANA HEALTH SERVICE

Introduction

Most countries are not reporting to WHO using the ICD10 codes. This is especially true for developing countries like Ghana. Most of these countries have poor civil registration and vital statistics system.

The purpose of this study is define a baseline in the quality of medically certified cause of deaths from facilities as a prelude to an intervention to improve the reporting on cause of deaths from the facilities. Data on cause of death was captured from both the District Health information system from the Health Sector and the Birth and Death Department. The Anaconda tool was used in the baseline to assess the quality of the existing medical cause of death data and also to inform the data quality improvement interventions that will be needed.

The Anaconda Tool is a robust, stand-alone electronic tool (in JavaFX) that checks the plausibility of both mortality levels and quality of COD data using established epidemiological and demographic patterns

Methodology

Data on deaths from Hospitals in Ghana that was captured in the line list of medical cause of death reporting in the DHIS2 national health information platform (DHIMS2) for the year 2015 was extracted into an excel format. Data on deaths registered with the National Birth and Death Registry was also collected.

The data on deaths from the Hospitals was formatted to suit the Anaconda excel format. The data was then imported into the Anaconda Tool.

Results

The population of Ghana for the year 2015 based on the 2010 census is estimated to be 27.8million. The expected number of death is 205,720 using the WHO estimated crude death rate of 7.4/1000. From the Birth and Death registration report for the year only 53,000 deaths were registered (26% of estimated deaths). From the health facilities only 13,538 (6.6% of estimated deaths) were medically certified with a cause of death and reported in the national health information system (DHIMS2).

After running the medically certified cause of death through the Anaconda tool, only 5,318 (2.6% of these deaths had a cause of suitable quality stated to be used for vital statistics.

Conclusion

The reporting on the cause of death in Ghana is very low and the quality of the reported deaths is also poor. There will be the need to put in place interventions to improve both the level of death reporting and also improve the quality of the reporting.
Overcoming health systems barriers through maternal and perinatal death surveillance and response

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Purpose:
The objective of this presentation is to share lessons learned on how quality data on maternal and perinatal deaths can improve health data systems and provide evidence for targeted health systems strengthening in 6 countries.

Focus:
A key intervention for improving maternal and perinatal survival is understanding the number and causes of maternal and perinatal deaths. Systematic analyses of overall mortality trends, as well as contributing factors leading to individual deaths can identify health systems barriers and inspire local solutions to prevent future similar deaths. In 2013, WHO launched Maternal Death Surveillance and Response (MDSR), a systematic process to document and review all maternal deaths and use the findings to improve the quality of care to improve maternal mortality estimates, and civil registration and vital statistics (CRVS). MDSR is based on each death being notified, reviewed, analysed, and recommendations formulated and implemented. This continuous action cycle collects information on when, where and why women die and documents what can be done to prevent future similar deaths at all health system levels. In 2016, WHO launched Making Every Baby Count, a guide for audit of perinatal deaths, which recommends a similar process for reviewing, analysing and implementing recommendations around perinatal mortality. Since the launch of these documents, a majority of countries have instituted policies mandating notification and review of maternal and perinatal deaths. This presentation will provide an overview of how 6 countries have implemented MPDSR, including overcoming barriers to implementation, and how implementation has supported health systems strengthening efforts.

Sub-theme:
This presentation is in the “Other” category, as it is cross-cutting in its support of the overall conference theme of advancing health systems for all in the Sustainable Development Goal Era. The presentation touches on several of the sub-themes including "The SDGs as a stimulus for renewed multisectoral action" and "Leaving no one behind: health systems that deliver for all". MPDSR can be used to target vulnerable groups at sub-national levels and depends on engaging multi-sectoral partners in strengthening health systems.

Target audience:
The audience for this presentation are those interested in health system strengthening through audit, including but not limited to maternal and newborn health program managers, health care providers, community health workers, and monitoring and evaluation specialists.
A community-based interventional research to improve Sub-Saharan immigrants’ sexual health in Paris area: results from the MAKASI project

Co-authors: Anne Gosselin-CEPED (Université Paris Descartes, IRD, INSERM); Corinne Taer-ARCAT; Romain Mbiribindi-Afrique Avenir; Nicolas Derche-ARCAT; Annabel Desgrées du Loû-CEPED (Université Paris Descartes, IRD, INSERM)

Background. In Europe, immigrants represented 37% of new HIV diagnoses in 2015 and immigrants from Sub-Saharan Africa are particularly affected (ECDC 2016). Between a third and half of HIV-positive immigrants in Europe acquired HIV post migration, in relation to social hardship experiences (Desgrées du Loû et al. 2016; Alvarez-Del Arco et al. 2017). Hence there is a strong need for efficient interventions to reduce immigrants’ social and sanitary vulnerability. The aim of this study is to evaluate a community-based intervention for Sub-Saharan immigrants’ empowerment in sexual health in Paris area.

Methods. Two community-based organisations (Arcat and Afrique Avenir) and three research teams conducted the pilot research. The formative phase was based upon participant observation in the two organizations, a literature review on efficient interventions, strong peers’ involvement and co-construction of the intervention between members of the community-based organisations and research teams in a participatory process.

Results. The resulting MAKASI project consists in a mobile team of health mediators and social worker identifying persons’ needs in health and social issues thanks to a specifically-designed vulnerability questionnaire. For eligible persons who are willing to participate, a personalised interview based on motivational interviewing principles is delivered, with three key elements: i) orientation to relevant partner-social and health services, ii) navigation if needed and iii) reinforcing capacities. The pilot phase of the intervention is scheduled between March and June 2018, and an evaluation of impact will compare the intervention group to a control group on indicators of sexual health and risk reduction, mental health, empowerment and health literacy.

Conclusion. A global health and social approach with vulnerable persons should result in a reduction of the exposure to HIV and STD infections among Sub-Saharan Africa immigrants.


Barriers and Enablers Associated with Differentiated Models of ART Delivery at the Community Level: A Three Country Study

Co-authors: Nicole Davis-JSI Research & Training Institute, Inc.; Malia Duffy-JSI Research & Training Institute, Inc.; Sabrina Eagan-JSI Research & Training Institute, Inc.; Melissa Sharer-St. Ambrose University

Background: In an effort to expand access to antiretroviral treatment (ART), countries across sub-Saharan Africa have been implementing and scaling differentiated approaches to ART distribution, particularly at the community level. These distribution models are typically designed to cater to clinically stable adult patients and aim to bring ART closer to where patients live, which, in turn, serves to decongest clinics and reduce the overall strain on a country’s health system. While documentation on the results of these models exists, there is limited information on the specific barriers and enablers that impacted the implementation of such models. This cross country study describes various models of differentiated ART distribution and the barriers and enablers associated with their implementation and scale-up.

Methods: The research team employed a qualitative approach for the study. Data was collected through semi-structured interviews and focus group discussions with 163 multi-level stakeholders representing policy, programmatic, and patient perspectives in South Africa, Uganda, and Zimbabwe.

Results: Across the study countries, three main types of differentiated delivery models were being implemented at the community level in all three countries: the Community Club Model, the Outreach Model, and the Community Distribution Point Model. Each model varied in its design across countries. Model innovations included grouping vulnerable populations together to form community clubs, working with the private sector to utilize private pharmacies or local shops as ART distribution points and integrating the distribution of ART with medications for other chronic diseases to combat stigma within the community.

Maintaining the linkage to care between community-based models and the facility was cited most often as a potential barrier, particularly from providers, due to their fear that community-level models reduce their ability to monitor patients routinely. Provider attitudes was often described as a common barrier before and during the early stages of implementation but later became an enabler once positive outcomes such as improved patient adherence or reduced workloads for clinic staff, began to emerge. Common enablers included peer support, robust information systems, mechanisms to link patients to care, patient and provider education, and clear policy and guidance at the national level.

Discussion: Differentiated models of ART delivery implemented in the community broaden patient access to ART. Understanding the associated barriers and enablers for each model will help governments and programs tailor implementation to specific contexts and contribute to rapid scale-up to better meet global demands for enhanced ART distribution.
Communities in the lead: the Botswana experience with community-led health improvement to support the strategy for achieving HIV epidemic control

Co-authors: Kesaobaka Dikgole-Human Resources for Health in 2030 (HRH2030); Cecil Haverkamp-Human Resources for Health in 2030 (HRH2030)

Botswana has been hit hard by HIV/AIDS, and while largely successful, its national response has been costly, characterized by intensely vertical disease control efforts. Botswana’s health system – once renowned for its proud embrace of Alma Ata and primary health care – was transformed through this emergency approach. Today, as the country is determined to think beyond HIV and re-balance its health system, focus is on the communities. With around 1 in 4 Batswana aged 15-49 living with the virus, there is a strong call for an integrated community perspective that characterized Botswana before HIV.

The Applying Science to Strengthen and Improve Systems (ASSIST) project, funded by USAID through PEPFAR, followed a community health system approach that applied quality improvement methodologies across seven districts in Botswana. Alongside local NGOs scaling HIV services under USAID’s community platform, ASSIST reactivated existing but dormant community structures and reconnected them with district health systems. Community improvement teams were established under the mandate of traditional leaders (di-Kgosi) and voluntarily embedded in the local governance context, representing existing community structures and committees. These community teams received dedicated coaching to systematically analyze barriers along the HIV/AIDS treatment cascade, to test and monitor locally relevant change ideas.

During dedicated ‘Learning Sessions’, community teams presented their results to national and district officials, ranging from community-led HIV testing to retention and adherence strategies. This demonstrated their willingness and capacity to contribute to common health goals, and the power of innovation that came from partnering with local providers to improve community health.

In Botswana’s unique context, traditional governance structures hold the promise of successfully revitalizing primary health care without undermining HIV control. In fact, this might directly help in sustaining epidemic control in the long term – provided the country dedicates the necessary support to build and institutionalize community partnerships.

Tangible improvements in community-level testing, retention and adherence were possible once community and providers coordinated their activities around community preferences, and ‘re-wired’ local accountability loops. These efforts achieved the return of unclarified (or ‘lost’) patients to ART at rates between 38% and 100%.

Building on ASSIST’s approach, the USAID-funded Human Resources for Health in 2030 program will continue to advise government on community-led service delivery strategies that differentiate care around community preferences and patient needs to improve integration and client orientation and support the re-alignment and operationalization of health workforce frameworks to innovative models of care to ‘deliver differently’ in Botswana.
Rethinking Retention: Mapping Interactions Between Multiple Factors That Influence Long-Term Engagement in HIV Care

Background: Failure to keep people living with HIV engaged in life-long care and treatment has serious implications for individual and population-level health. Nested within a four-province study of HIV care and treatment outcomes, we explored the dynamic role of social and service-related factors influencing retention in HIV care in Zambia.

Methods: From a stratified random sample of 31 facilities, eight clinics were selected, one urban and one rural from each province. Across these sites we conducted a total of 69 in-depth interviews, including with patients (including pregnant women) engaged in care (n=28), disengaged from care (n=15), engaged facility transferee (n=12), and friends/family of deceased patients (n=14). At the same sites we conducted 24 focus group discussions with a total of 192 lay and professional healthcare workers (HCWs). Two-day observations in each of the eight facilities helped triangulate data on operational context, provider relations and patient-provider interactions. We ordered and analysed data using an adapted version of Ewart’s Social Action Theory.

Results: Three overarching findings emerged. First, the experience of living with HIV and engaging in HIV care in Zambia is a social, not individual experience, influenced by social and gendered norms and life goals including financial stability, raising family and living stigma-free. Second, patients and their networks act collectively to negotiate and navigate HIV care. Anticipated responses from social network influenced patients' willingness to engage in care, while emotional and material support from those networks influenced individuals’ capacity to remain in HIV care. Lastly, health system factors were most influential where they facilitated or undermined peoples’ collective approach to health service use. Participants living with HIV reported facilitation of both their initial and continued engagement in care where services involved social networks, such as during couples testing and community outreach. Conversely, service features that were poorly aligned with respondents’ social reality (e.g. workplace obligations) hindered long-term engagement.

Conclusions: This study moves beyond listing barriers or socio-ecological groupings, to explain how social and health systems interact to produce HIV care outcomes. Our findings challenge the implicit assumption of individual agency underpinning many retention studies to highlight the social nature of illness and healthcare utilization for HIV in Zambia. This understanding of collective action for accessing and remaining in HIV care should underpin future efforts to revise and reform HIV and potentially other chronic service models with explicit attention paid to community structures and health systems.
Eleanor Whyle, University of Cape Town
Poster Number: 215

Strengthening health systems for inclusive, equitable and just societies: Perspectives on values-based health systems

Co-authors: Eleanor Beth Whyle-University of Cape Town; Jill Olivier-University of Cape Town

“Rather than simply being shaped by the changing basis of societal values, a trusting and trusted health system can contribute to building wider social value and social order.” Gilson, L. 2003. Trust and the development of health care as a social institution

Background
Health systems are complex social systems. HPSR theory suggests that values constitute a central dimension of this complexity. This perspective is not new, but has gained traction in recent years, and values are now included in many health systems conceptual models and frameworks.

Method
We conducted a literature review on ‘values in health systems’ and ‘values in HPSR’. The review, conducted in 2017 and 2018, combined scoping review phases with Campbell-styled systematic review to explore common ways of thinking about values in the health systems literature (including peer-reviewed journals, grey literature, and HSR conference materials). The results were analysed using concept-mapping to identify theoretical and empirical research where values were addressed, and to understand how HPS researchers understand the influence of values on health systems.

Results
A values-orientation is considered foundational to the developing field of HPSR, and the literature reveals widespread agreement regarding the significance of values. Values are evident in efforts to evaluate health systems – such as the WHO’s evaluative model, which emphasises responsiveness and fairness, service delivery that aligns with patient values, and financing mechanisms that reflect social justice ideals. Values are also increasingly recognised as key determinants of policy-maker behaviour, of the strength of relationships in inter-sectoral partnerships, and, as underlying seemingly ‘rational’ economic decisions in the distribution of scarce resources. In addition, complexity theory illuminates the role of values as an explanation for the system’s resistance to change.

Discussion
Values are commonly understood as both inputs and outputs of health systems – social and individual values shape health systems change, and health systems can reinforce or modify commonly held values. Numerous HPS researchers draw connections between social values, health system strengthening, and the production of social value. This suggests that social values such as inclusiveness, solidarity and fairness, can be reinforced through health service delivery and through the structure of the health system. On this framing, health systems can play a central role in building inclusive, just and equitable societies that meet the health and social needs of society’s most vulnerable. This requires that the structure of the health system reflects social values that transcend socio-economic, cultural, geographic and gender differences.
When Alignment between Governments and Donors Result in Vacuums of Support: Evidence from Prioritization of HIV Services in Kenya

Co-authors: Daniela C Rodriguez-Johns Hopkins Bloomberg School of Public Health; Caroline Mackenzie-Ipsos-Kenya; Mary Qiu-ThinkWell Global; Sara Bennett-Johns Hopkins Bloomberg School of Public Health

Background

PEPFAR’s Geographic Prioritization (GP) in Kenya started in 2015 aiming to prioritize support for HIV services by burden of disease. Assistance to seven counties with low burden was drastically reduced as they shifted to government central support (CS). These counties represent the Northeastern parts of the country, characterized by remote landscapes, poor infrastructure, and security challenges. GP concurred with the Kenyan government’s (GOK) own assessments, which also prioritized activities geographically. Notably, these changes took place shortly after new county governments were established under nationwide devolution in 2013. We present results of the overlapping processes of GP and devolution on CS counties providing HIV services.

Methods

Focusing on the qualitative results of a mixed methods evaluation of GP, we present results from two rounds of national-level stakeholder interviews, and six case studies of facilities experiencing GP, including discussions with facility staff, county government and patients. Data were analyzed thematically across levels, rounds and cases.

Results

Donor support for core HIV services, like anti-retroviral treatment (ART), continues to be channeled through the MOH, while counties are responsible for service delivery. National-level respondents did not believe that GP would affect counties acutely because HIV core support would remain unchanged. However, GP also resulted in the loss of ancillary support to counties, like training, viral load transport and community outreach.

There is limited evidence that counties have stepped in to fill the gaps left by PEPFAR, in part because of the challenges in getting CS counties to prioritize HIV care. Although ART is still available, treatment for co-infections as well as support services are no longer fully available. Counties expected greater support from national-level agencies but given changing roles under devolution, this has not materialized amplifying effects.

GOK and PEPFAR respondents agreed that GOK, not donors, is responsible for ensuring equitable HIV service delivery. Civil society respondents underscored the threats to equity in light of GOK’s own shifts away from the CS counties. However, when funding changed rapidly, counties were left with additional responsibilities and limited options to respond.

Conclusions

The combination of GP, both by government and donors, with devolution has created an environment in which counties with low burden of disease—and limited resources—are struggling to meet their new responsibilities with minimal technical support. This raises significant questions about where responsibilities lie for ensuring equity in service delivery when major actors shift away from the same communities under epidemiological reasoning.
Care for HIV exposed infants- Disparities in primary and secondary health facilities in Benue state, Nigeria.

Co-authors: Helen Sagay-Institute of Tropical Medicine, Antwerp; Josephine Oche-AIDS prevention in Nigeria, APIN; Honey Ezeofor-AIDS prevention in Nigeria, APIN

Background
Improving the survival of HIV exposed infants contributes to achieving sustainable development goal of healthy life for all. Decentralization of PMTCT services from secondary to primary health facilities is a strategy to increase access to care for HIV exposed infants. The minimum package of intervention includes providing (1) Nevirapine at birth (2) HIV DNA PCR at 6-8 weeks (3) Rapid HIV test at 18 months and (4) retaining infants in care up to 18 months. We expect care, at all four-time points to be better the primary as its proximal to community. To determine if this is true, we compared the proportion of infants receiving this minimum package at the four-time points for both levels of care.

Method
A retrospective cohort study of 2,216 HIV exposed infants (0-18 months) enrolled across 50 primary and 7 secondary health facilities between October 2013 to September, 2014. Data was retrieved from facility registers. We analyzed the association between level of care and four variables: infants receiving (1) Nevirapine at birth, (2) HIV DNA PCR at 6-8 weeks, (3) Rapid HIV test at 18 months and (4) Retention in care at 18 months with final outcome. Analysis done with Epi-info software (version 3.5.4).

Results
2,216 infants enrolled, 1960 (89.5%) received nevirapine at birth, 1088 (49.1%) had HIV DNA PCR test at 6-8 weeks, 1289 (58.2%) had HIV test result at 18 months, 1210 (54.6%) were retained at 18 months. Infants enrolled in primary healthcare were more likely to receive nevirapine at birth compared to secondary healthcare (RR 1.10, 95% CI 1.07-1.13). Infants at primary healthcare care were less likely to have a HIV DNA PCR test at 6-8 weeks (RR, 0.59; 95% CI, 0.52-0.68), and less likely to have a rapid HIV test result (RR, 0.76; 95% CI, 0.69-0.84) at 18 months. Infants are also more likely to be lost from the program at primary healthcare (RR, 1.29; 95% CI, 1.17-1.41).

Conclusions
More infants received care at all four-time points in secondary health facilities, even though decentralization occurred three years before study. The missed opportunities were more at primary healthcare facilities. The findings thus reflect gaps in service provision at primary healthcare. Based on context knowledge, we expect the high turnover of staff and poor supply chain management to be key contributing factors. In the coming month, we will through document review try and understand why this gap exists.
‘Being healthy’ as a factor for both accepting and refusing to initiate ART: a qualitative study in the era of Test and Treat in Mozambique

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Introduction:

In mid-2016, Mozambique began the phased implementation of “Test-and-Treat” (T&T), which enrolls HIV positive clients into antiretroviral treatment (ART) immediately, regardless of clinical stage or CD4 count. The aim of this study was to describe perceived barriers and facilitators to ART initiation under T&T. We examined the relationship between the lived experience of patients who tested HIV-positive in the context of T&T and how ‘good health’ influenced their perception of ART initiation.

Methods:

A cross-sectional qualitative study was conducted across 10 health facilities in 4 provinces in Mozambique where T&T was rolled-out. Eighty in-depth interviews with HIV-positive clients diagnosed under T&T (60 clients initiated ART/20 did not initiate) were conducted. The vast majority of clients felt healthy at the time of HIV-diagnosis. In addition, 9 focus group discussions with health care workers (n=53) were completed. The analysis used a deductive and inductive approach to develop analytic categories and transcripts were coded using NVIVO-11.

Results:

Feeling ‘healthy’ functioned both as a barrier and facilitator for ART initiation. Clients in ‘good health’ often found it hard to believe a positive HIV diagnosis, explaining that they could not be positive because they were not sick. If they did believe the validity of the test, many did not understand why they were asked to start ART right away. Patients also reported concerns about ART side effects, fear of inadvertent HIV status disclosure, as well as discrimination, limited privacy at health facilities, and long waiting times as barriers to initiation. In contrast, being in ‘good health’ was also a key motivator for many clients to start treatment, allowing them to remain healthy, maintain responsibilities such as work and caring for dependents, and avoid unwanted disclosure. Importantly, many clients found that good health acted simultaneously as a barrier and facilitator, complicating decisions around ART initiation.

Conclusions:

Our study provides an in-depth understanding of the complexity and dynamics of perceptions of ‘health’ among newly diagnosed HIV positive clients and how individual perceptions of ‘being healthy’ may influence ART initiation under T&T. It is critical that future interventions engage with the priorities and experiences of individuals in relation to notions of health and illness, enabling providers to better assess patient’s perceptions and improve counseling.
Factors associated with HIV stigma towards colleagues in the healthcare workforce in South Africa

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Background: South Africa has the highest total number of HIV positive people in the world and healthcare workers are equally affected. Stigmatisation in the health care setting has severe implications for healthcare workers and health facilities when HIV-positive healthcare workers delay or avoid seeking care out of fear of being stigmatised, causing increased morbidity and mortality. This is causing harm to an already under staffed and strained health system. In an attempt to inform future interventions to address this issue, this study explores factors associated with healthcare workers’ stigma towards their own colleagues.

Methods: In the Free State province, South Africa, a representative sample of 882 healthcare workers from eight hospitals was surveyed as part of the baseline measurement of an ongoing cluster randomised trial. First we validated and reliability tested a scale measuring healthcare workers’ HIV stigma toward colleagues, using confirmatory factor analysis. We then applied multiple-group structural equation modelling to explore the association with various factors on HIV stigma. The study sample was divided into three categories of healthcare workers: clinical staff, administrative/managerial staff and hospital support staff. The strength of the effects of the each of the factors associated with HIV stigma were compared between the occupational groups with Chi2 tests.

Results: Even though the three categories of healthcare workers varied significantly in descriptive characteristics such as sex, race, HIV knowledge and knowledge of an HIV positive colleague, there was no significant differences in the effects of the explanatory factors on stigma. Thus, in the total sample, there was a significant negative relationship between whether the respondent knew of an HIV positive colleague and HIV stigma towards other colleagues (β=-0.40, p=0.000). Other factors linked with reduced HIV stigma were whether a colleague did something to reduce stigma in the workplace (β=-0.24, p=0.002), and having basic HIV knowledge (β=-0.111, p=0.003).

Conclusion: The results have implications for the understanding and crafting of interventions and show that the factors associated with stigma have similar effects over different occupations of healthcare workers. Interventions to reduce stigma among healthcare workers should focus on social interactions with HIV positive people, peer involvement and making sure that all have at least basic HIV knowledge. Even though healthcare workers consist of a diverse group of people, the results show that the same factors are associated with their HIV stigma. Interventions addressing these factors can thus be implicated across the whole work force.
The Long-Term Access barriers of retention in HIV/AIDS care faced by patients living with HIV/AIDS in Northern Tanzania: The cost of stigma, loyalty and preference

Co-authors: Carl Jacob Mhina-Kilimanjaro Christian Medical Center, University of Cape Town; Nicola Foster-University of Cape Town; Jill Olivier-University of Cape Town

Background

The UNAIDS has developed its 2016–2021 Strategy, "On the Fast-Track to End AIDS," with key inputs from faith based organizations which includes integrating HIV/AIDS services with those operated by Faith Based Health Providers (FBHPs). Engagement of FBHPs is key as they have been responsive in providing HIV/AIDS services together with the public sector, and filling the gaps left by the public sector. Given their ease of access, FBHPs are considered important potential role players in the implementation of the new fast track strategies by ensuring retention of PLWHA into HIV/AIDS Care and eventual viral load suppression.

Methods

We conducted a study in three purposively selected health facilities (one not for profit faith based and two public hospitals). 618 clinic exit interviews were conducted; 336 from the faith based health facility and 282 from the public hospitals. Information on retention and clinical characteristics in the past year were abstracted from health records while addressing the three dimensions of access (affordability, acceptability and acceptability) were extracted using clinic exit interviews. A thematic analysis of 13 specific questions addressing each dimension was done manually generating themes.

Results

Only 14.4% of the participants missed a clinic visit contrary to 42.6% who were late to collect their medications. 22.01% of the participants had no health insurance, 80.15% came from the FBHP. 38.4% (90.62% from the FBHP) paid out-of-pocket for service at the; and 70.66% stated it was not easy to pay. To cope with the health service payments 55.02% and 45.15% had to borrow money or cut meat respectively. 73.9% of the participants stated the clinic was not the closest. Themes identified as barriers of access were financial barriers from direct and indirect costs, stigmatization from nearby clinics, 3) Lack of medications and treatment of other diseases in nearby public health facilities and and low trust to the clinic accounted by poor interpersonal skills of health workers.

Conclusion

Although FBHPs are key in filling the gap left by public health facilities their models of access like out-of-pocket payments for services is a big barrier to long-term access. The small number of PLWHA with insurance hinder their universal access to HIV/AIDS care fogged by the notion of free antiretroviral. Regardless the presence of consultation fees, cost of transport and the long distance, still there was high acceptability of the FBHP among the PLWHA due to co-allocation of services in the facility, low stigma and good staff interpersonal skills.

Co-authors: Laura Ferguson-Program on Global Health and Human Rights, University of Southern California; Alexandra Nicholson-Program on Global Health and Human Rights, University of Southern California; Deena Patel-United Nations Development Program, Regional Service Centre for Africa; David Owolabi-United Nations Development Program, Regional Service Centre for Africa; Amitrajit Saha-United Nations Development Program, Regional Service Centre for Africa; Tilley Sellers-United Nations Development Program, Regional Service Centre for Africa; Sofia Gruskin-Program on Global Health and Human Rights, University of Southern California

Background

As part of the Global Fund’s Africa Regional HIV Grant for Removing Legal Barriers to Access, UNDP is working to reduce the impacts of HIV and tuberculosis (TB) on vulnerable populations in Botswana, Côte D’Ivoire, Kenya, Malawi, Nigeria, Senegal, Seychelles, Tanzania, Uganda and Zambia. The Program on Global Health and Human Rights, University of Southern California conducted a baseline assessment of laws, policies and practice at the national and regional levels that support or hinder access to and delivery of HIV and TB services for vulnerable populations, including access to justice, and mechanisms that can prevent and address rights violations.

Methods

Across the focus countries, this evaluation consisted of document and literature reviews, 44 key informant interviews and 16 focus group discussions with civil society, government and health workers, using human rights as the framework.

Results

In all project countries, key populations face a host of distinct but related challenges to accessing services, including bad and conflicting laws and insufficient knowledge, implementation and use of good law. For example, stigma and discrimination hindering access and use of HIV and TB services are largely seen to be connected to or a direct result of laws and policies in place. Vulnerable populations oftentimes remain hidden and do not access services even if they are on offer, as fear of stigma is high.

While country context is key, requiring attention to specificities and unique cultural and religious concerns, looking at existing laws, policies, their implementation, and how they are understood and experienced is a key initial step to fostering a supportive environment for vulnerable populations to access needed health services.

Alongside efforts within the health system and law reform more generally, work can usefully target implementers in other sectors, e.g. working with law enforcement to understand the deleterious public health and human rights impact of arresting people carrying condoms, to create considerable gains for key populations even in the short term.

Discussion/Conclusions

Implementing this type of assessment creates opportunities to gain insights into the range of barriers that vulnerable population groups face in using HIV and TB-related services. A human rights-based approach to evaluation includes attention to equality and non-discrimination, inclusion, participation, and accountability, all of which are key to learning about and addressing the diversity of barriers vulnerable populations face, including the pathways towards legal, policy and programmatic change.
Poster Abstracts

Idoteyin Ezirim, National Agency for the Control of AIDS, Nigeria
Poster Number: 222

Role of Management in Enhancing Efficiency of Community level HIV Programs in Nigeria

Co-authors: Idoteyin Oton Ezirim-National Agency for the Control of AIDS, Nigeria; Manish Muhuri-Institute of Medical Biology, Agency for Science, Technology and Research, Singapore; Francis Agbo-National Agency for the Control of AIDS, Nigeria

Background: HIV infection in Nigeria is highest among key populations such as female sex workers (FSW). In response to this issue, community-based organizations (CBOs) deliver HIV prevention services to FSW and link HIV-positive FSW to health facilities to receive care and treatment. At CBOs, HIV prevention services are provided by CBO staff and volunteers. One overlooked avenue for enhancing efficiency in the delivery of services is by improving personnel management. This study was done to understand the challenges faced by CBO staff during service delivery and management practices hindering their output.

Methods: Qualitative methods were used in this study. Staffs and volunteers from 9 CBOs in three states, Abuja, Lagos and Nasarrawa participated in the study. States were selected using convenience sampling. Journals were distributed to CBO staff to document their daily challenges for 3-6 weeks. After 6 weeks, we collected 23 journals, read the entries and conducted 6 non-participant observations and 31 key informant interviews. Information from the completed journals, interviews and observations, were grouped into salient themes and used to reveal insights. Using these insights, we conducted brainstorming sessions with CBOs to generate problem-solving ideas. The most relevant ideas were thereafter, tested in focus groups.

Result: The study revealed that CBO staff saw HIV services they provide as rigid and set by donors. As such, the staff did not solicit and implement feedback from volunteers to improve the program. Therefore, instituting feedback mechanisms will make CBO volunteers and staff feel more involved in activities and will thus serve as an avenue for harvesting solutions to challenges in service delivery.

The study also showed that FSW peer session schedules change constantly and volunteers find it difficult to communicate changes to CBO staff resulting in poor supervision and monitoring. When volunteers are poorly supervised it will affect the quality of services they provide. Therefore by ensuring communication within CBO personnel, it will improve coordination of activities and quality of HIV services delivered.

Finally, while CBOs have systems in place to reward performance, these systems were underutilized and not incentivized. If reward systems for best practices are rejuvenated, it will motivate personnel to achieve higher targets.

Conclusion: Improving personnel management practices can enhance community level health programs. Feedback mechanisms, communication systems and reward systems are management tools that will stimulate performance and ensure efficient delivery of HIV prevention services from personnel, thereby leading to increased output.
Taking the mountain to Mohammed: facility preparedness and its role in the success of an innovative state-wide onsite nurse-midwife mentoring initiative in Bihar, India

Co-authors: Tanmay Mahapatra-CARE India Solutions for Sustainable Development; Aboli Gore-CARE India Solutions for Sustainable Development; Aritra Das-CARE India Solutions for Sustainable Development; Sunil Sonthalia-CARE India Solutions for Sustainable Development; Hemant Shah-CARE India Solutions for Sustainable Development; Debarshi Bhattacharya-Bill and Melinda Gates Foundation

Background

Bihar state has among the highest birth-rates in India, with estimated 2.8 million deliveries in 2017, of which about 76% in rural areas were institutional. During 2007-2011, institutional births rapidly accelerated from about 20% to about 60%, driven by a national campaign involving maternity benefit cash incentives. Coming on the back of two decades of systemic neglect of public health institutions, this influx severely tested the capacities of these run-down institutions. In particular, nurses were found wanting, having had neither formal training nor experience in midwifery, posing grave risks to maternal and neonatal survival.

Methods

A catalytic technical assistance program of CARE India responded to the crisis by evolving an onsite, bedside, practice-based nurse mentoring program that eventually covered 3244 nurses in around 400 of the highest-load public facilities of the state, exposing each nurse to about 42-48 days of hand-held skilling over 6-8 months. Mentoring methodologies were evolved after piloting several approaches, and the mentoring program was embedded in an ongoing quality improvement initiative. To address skilling in complications management, a series of simulations using inexpensive props, developed by PRONTO International, USA, were introduced. The program together covered obstetric and neonatal care and the insertion and management of intrauterine contraceptive devices.

Results

The effect of the intervention was evaluated, inter alia, through direct observation of large numbers of actual deliveries by trained observers before and after exposure. Observers collected data regarding knowledge, skills and practices of mentees at baseline and endline. Findings indicated that intervention was successful in improving post-admission examination (BP by 50%), infection prevention (handwashing by 37%), use of proper dose/timing/route (by 53%) of Oxytocin/other uterotonics for management of third-stage of labour, cord-cutting practices (sterile by 52%), in-facility skin-to-skin-care (by 21%) and initiation of breast-feeding (by 7%). Misuse of fundal pressure application and oxytocics to hasten labor was substantially reduced but not eliminated. Reported still birth rates dropped steadily over the period. Multiple regressions revealed that better delivery-related practices among mentees were knowledge-driven ($p<0.001$), strongly associated with mentoring ($p<0.001$) and the impact was even bigger with a better facility preparedness in terms of availability of instrument/equipment/consumable ($p<0.001$)

Conclusion

Nurse-mentoring provided better birth experiences to women in Bihar, even more in a prepared facility. The next phase of the mentoring program seeks to institutionalize District Mentoring Teams within government hospitals across the state that could potentially perpetuate improvement with minimal external intervention.
Associations between the quality and utilisation of primary care and preventable hospitalisations amongst diabetic patients in Mexico

Co-authors: David G. Lugo-Palacios-Manchester Centre for Health Economics, The University of Manchester; John Cairns-London School of Hygiene and Tropical Medicine

Background: Currently ranked sixth worldwide for number of adults with diabetes, Mexico is amongst the countries experiencing the most serious consequences of this disease. To improve health outcomes and ensure financial sustainability, the Mexican Institute of Social Security (IMSS) recently implemented a strategic plan to encourage its affiliates to go for regular check-ups with a family doctor (FD), attend preventive care sessions and participate in a diabetes management programme (DiabetIMSS).

Objective: To investigate the extent to which quality and utilisation of primary care are associated with the probability and frequency of emergency hospital admissions (EAs) and ambulatory care sensitive hospitalisations (ACSHs) amongst diabetic patients.

Methods: Hurdle and zero-inflated models are estimated to investigate associations between preventable hospitalisations and indicators of quality and utilisation of primary care, including number of visits to the FD, the proportion of FD visits where blood glucose was measured, and the number of times patients attended preventive care and DiabetIMSS sessions.

Data: This study analyses 26,762,187 records of primary and secondary health care received in 2014 by 2,842,310 patients from the IMSS Census of Diabetic Patients.

Results: FD visits are positively and significantly associated with the probability of experiencing at least one EA or ACSH and positively associated with the frequency of these hospitalisations. A 10% increase in the proportion of FD visits where a patient's blood glucose was measured is associated with a reduction of 0.2 and 0.1 percentage points in the probabilities of experiencing at least one EA or at least one ACSH, respectively. It is also significantly associated with fewer EAs and fewer ACSHs. More frequent attendance to DiabetIMSS is associated with lower probabilities of having at least one EA or at least one ACSH. An additional visit to DiabetIMSS is associated with 0.03 fewer EAs. Attendance at preventive care sessions also has a negative association with the probability and frequency of EAs and ACSHs.

Conclusion: While previous research has shown the increasing trend of preventable hospitalisations and their associated costs during the last decade in Mexico, there is little evidence regarding how current health care interventions can prevent EAs and ACSHs. This study finds that measuring blood glucose during visits to the FD, as well as active participation in preventive care and DiabetIMSS are associated with fewer EAs and ACSHs. These results suggest that improving doctor and patient compliance to clinical guidelines and medical advice, respectively, can prevent costly hospitalisations.
UNDERSTANDING AND RESOLVING FACTORS INFLUENCING THE MANAGEMENT OF SEVERE ACUTE MALNUTRITION WITHIN SOUTH AFRICA’S REFERRAL SYSTEMS: A NEED FOR MULTI-LEVEL ACTION

Co-authors: Faith Nankasa Mambulu-University of the Witwatersrand, School of Public Health; John Eyles-University of the Witwatersrand, School of Public Health; Prudence Ditlopo-University of the Witwatersrand, School of Public Health

Background: Reducing preventable child deaths (SDG 3.2) will require focusing on high mortality diseases at critical care levels thus our focus on severe acute malnutrition (SAM) referral systems. Despite 46 years of developing preventive-management guidelines, malnutrition accounts for 50% of low and middle income countries’ (LMICs) under-five deaths. South Africa (SA) has effective SAM management and referral guidelines, yet partly because of implementation infidelity, SAM accounts for 30% of under-five deaths. This study is set in 2 Sub-Districts [a national health insurance (NHI) pilot and non-NHI site] of SA’s North West province (NWP) where SAM management at NHI hospital was limited, Non-NHI Sub-District referral processes were partial and clinics barely stabilised SAM. Therefore, we examined factors enabling or hindering SAM management within referral levels (clinic, ambulance-transit, hospital).

Methods: Using a competing value framework (CVF) which views organisational behaviour as a product of competing cultures, a qualitative case study was conducted within 2 hospitals, 3 community health centres, 4 clinics and 2 emergency service stations. Data was collected from 40 in-depth interviews (with clinical, ambulatory and administrative personnel), 40 patient file reviews, observations and 9 facility appraisals. Data was analysed into themes of enablers and hindrances which were aligned to CVF cultures of clan (collaboration), adhocracy (creativity) and hierarchy (control) using NVivo.

Results: Unavailability of organisational structures to ensure attentiveness to guidelines and availability of resources hindered SAM management. Therapeutic foods for stabilising SAM at clinic and transit levels were only stocked at hospitals limiting pre-admission treatment. Referral challenges in the Non-NHI Sub-District resulted from absence of political will while the NHI Sub-District was fulfilling piloting strategies thus revised and renewed focus on executing successful referrals. Collaboration among various cadres of practitioners and referral levels care also influenced timely and successful care. Where one practitioner (doctor/nurse/dietician/therapist/social worker) ignored another’s recommendations, SAM became critical or relapsed. Inadequately-skilled practitioners also impaired care; ambulance personnel had less/no mandate to stabilise SAM and only Non-NHI hospital had paediatric nurses and general doctors with paediatric experience while departmental shifts in other facilities limited paediatric expertise.

Discussion: In referral SAM management, challenges at one or more levels weaken the entire system. Collaboration (Clan-culture) across referral levels and actors (including CHWs, caregivers and facility managers) will be required to prevent SAM death in SA and LMICs. Contextualising guidelines to suit resources availability (adhocracy-culture), strengthening facility/transit operational structures and SAM-specific training for relevant professions will also be essential (hierarchy-culture).
Managing absenteeism in Uganda's health sector: successes and lessons learned

Co-authors: Vincent Oketcho-IntraHealth International/Uganda; Allan Agaba-IntraHealth International/Uganda; Simon Mugalu Kamya-IntraHealth International/Uganda; Samson Olum-Uganda Ministry of Health

Background: Health worker absenteeism is a major barrier to improving health outcomes in developing countries, resulting in reduced productivity, wasted resources, disruption of health care delivery, and poor access to services by the population. In Uganda, health workers’ rate of unauthorized absenteeism was estimated at 52% in 2013. The USAID-funded Strengthening Human Resources for Health activity, led by IntraHealth International, worked with the Ministry of Health and stakeholders to implement a multi-pronged strategy to reduce absenteeism. Interventions included strengthening performance management and accountability systems in health facilities and districts, implementing government policy guidelines on absenteeism and attendance to duty, and sharing absenteeism data with health managers for action (e.g., paying salaries based on days worked). Districts now track absenteeism using the unified online human resources information system (iHRIS) that has been deployed throughout Uganda with technical assistance from IntraHealth. The absenteeism reduction approach was piloted in 27 districts in 2016 and rolled out to 116 districts (4,507 facilities) during 2017.

Methods: A longitudinal analysis of health worker absenteeism rates was conducted in districts and health facilities annually from 2015-17. Survey teams made unannounced visits to random samples of health facilities and recorded whether they found health workers on the job. This was supplemented by data on health worker attendance over the previous 5 days preceding the survey to obtain a deeper understanding of health worker attendance patterns. Additional information was collected from key informant interviews with health managers at facility and district levels.

Results: The absenteeism rate (unauthorized absenteeism) declined from 50% in 2015, to 13.7% in 2016, and 11.9% in 2017. The overall rate of health worker absence from health facility (with or without authorization) declined from 68.8% in 2015, to 46% in 2016, to 42.6% in 2017.

Conclusions: Governments can significantly reduce absenteeism and its impact on the health system as many of the causes of absenteeism are within management control (e.g., leave, off-duty time, workshops and other official assignments). This requires a holistic approach applying a combination of policy and management-level interventions, as well as multi-stakeholder collaboration with political and community leadership and other government and civil society organizations. Management action is critical for success of absenteeism reduction strategies. Use of an online human resources information system can simplify tracking and analysis to quickly provide managers with evidence for action on absenteeism.
Laboratory Capacities - a picture of starvation amidst plenty: An assessment of readiness, bottlenecks and innovations across 114 facilities in 21 districts in Uganda

Co-authors: Suzanne N Kiwanuka-MAKERERE UNIVERSITY SCHOOL OF PUBLIC HEALTH; Angela N Kisakye-Makerere University School of Public Health; Noel Namuhani-Makerere University School of Public Health; Martha Akulume-Makerere University School of Public Health; Simeon Kalyesubula-Central Public Health Laboratories, Ministry of Health Uganda

Background; Timely laboratory tests are critical for the efficient treatment of patients, surveillance and prevention of infectious and non-communicable diseases and essential for strengthening health systems. Despite massive investments over the past decades clinicians still rely on their clinical acumen alone due to systems inadequacies. This study assessed laboratory readiness, innovations and service delivery bottlenecks in Uganda.

Methods; One hundred fourteen (114) laboratories were purposively selected from 21 randomly selected districts across the country. The laboratories included; National and regional referral hospital, general hospital, Health center IV and III laboratories, across private, public and faith based facilities. WHO/USAID assessment tool for laboratory services and supply chain (ATLAS), 2006 and the Essential Medicines and Health supplies checklist for Uganda were used to collect data. 100 key informant interviews and 1420 client exit interviews were conducted.

Results; Almost 100% laboratories were able to conduct HIV, TB, Malaria and syphilis tests but many (60%) were unable to provide electrolyte, urine, stool microscopy and blood chemistry tests. The skewness in laboratory capacity building resulted from lopsided investments by funding organizations resulting in systems distortions, inequitable and compromised quality of service delivery. Rural, urban inequalities were high. The existence of regional hub laboratories with enhanced capacity eased service gaps aided by a locally innovative transport system of motorcycle to transport samples and test results. Service delivery bottlenecks included equipment challenges (82.0%), Lack of financial resources (75.0%), lack of reagents, consumables and safety cabinets (75.0%) and human resource challenges across all laboratory levels (73.0%). Only 36.8% and 41.7% laboratory technologists were filled in general and regional referral hospitals respectively. Lower health facilities were more constrained by inadequate spaces lack of reagents and consumables. Overall, most laboratories lacked the capacity to diagnose non-communicable diseases.

Conclusions; The system driven skewed investment in laboratories, favoring urban over rural and HIV/TB/Malaria over other equally prevalent conditions is worrying. This has inadvertently introduced system driven inequities, which threaten the achievement of UHC and can only be reversed through policy driven reorientation of investments. Addressing long standing system bottleneck such as equipment challenges, inadequate supplies and human resource gaps is critical to strengthening the laboratory and health system that delivers quality and accessible services in order to accelerate the UHC agenda and SDG 3 target. The harmonization of equipment procurement and maintenance is critical for efficiency and requisite human resources cannot be overlooked.
Strengthening Referral Networks for Management of Hypertension Across the Health System (STRENGTHS) in western Kenya: a study protocol of a cluster randomized trial

Co-authors: Tim Mercer-The University of Texas at Austin Dell Medical School; Benson Njuguna-Moi Teaching and Referral Hospital; Gerald Bloomfield-Duke University Medical Center; Jonathan Dick-Indiana University School of Medicine; Eric Finkelstein-Duke-NUS Medical School; Jemimah Kamano-Moi University School of Medicine; Ann Mwangi-Moi University School of Medicine; Violet Naanyu-Moi University School of Medicine; Sonak Pastakia-Purdue University College of Pharmacy; Thomas Valente-University of Southern California; Rajesh Vedanthan-Icahn School of Medicine at Mount Sinai; Constantine Akwanalo-Moi University School of Medicine

Background

Hypertension is a major risk factor for cardiovascular disease (CVD), yet treatment and control rates for hypertension are very low in low- and middle-income countries (LMICs). Lack of effective referral networks between different levels of the health system is one factor that threatens the ability to achieve adequate blood pressure control and prevent CVD-related morbidity. Health information technology and peer support are two strategies that have improved care coordination and clinical outcomes for other disease entities in other settings; however, their effectiveness in strengthening referral networks to improve blood pressure control and reduce CVD risk in low-resource settings is unknown.

Methods / Design

We will use the PRECEDE-PROCEED framework to conduct transdisciplinary implementation research, focused on strengthening referral networks for hypertension in western Kenya. We will conduct a baseline needs and contextual assessment using a mixed-methods approach, in order to inform a participatory, community-based design process to fully develop a contextually and culturally appropriate intervention model that combines health information technology and peer support. Subsequently, we will conduct a two-arm cluster randomized trial comparing: 1) usual care for referrals vs. 2) referral networks strengthened with our intervention. The primary outcome will be one-year change in systolic blood pressure. The key secondary clinical outcome will be CVD risk reduction, and the key secondary implementation outcomes will include referral process metrics such as referral appropriateness and completion rates. We will conduct a mediation analysis to evaluate the influence of changes in referral network characteristics on intervention outcomes, a moderation analysis to evaluate the influence of baseline referral network characteristics on the effectiveness of the intervention, as well as a process evaluation using the Saunders Framework. Finally, we will analyze the cost-effectiveness of the intervention, in terms of costs per unit decrease in systolic blood pressure, per percent change in CVD risk score, and per disability-adjusted life year saved.

Discussion

This study will provide evidence for the implementation of innovative strategies for strengthening referral networks to improve hypertension control in LMICs. If effective, it has the potential to be a scalable model for health systems strengthening in other low-resource settings worldwide.
Poster Abstracts

Paul Ouma, KEMRI-Wellcome Trust Research Programme
Poster Number: 229

Geographic access to emergency hospital care provided by the public sector in sub-Saharan Africa in 2015

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Background

Timely access to emergency or acute care can significantly reduce mortality and international benchmarks for access to emergency hospital care have been established to guide ambitions for universal health care by 2030. However, there is no complete geo-coded inventory of hospital services in Africa in relation to how populations might access these services. This work therefore aimed to assemble a geocoded inventory of public hospitals in sub-Saharan Africa in relation to how populations might access these services, with an additional focus on women of childbearing age.

Methods

In this work, the first geocoded inventory of public hospitals across 48 countries and islands of sub-Saharan Africa was assembled from 100 different sources. A cost distance algorithm based on the location of 4893 public hospitals, population distributions and road networks at a 100m spatial resolution, was used to compute the proportion of populations and women of childbearing age living within a combined walking and motorized travel time of 2 hours to emergency hospital services.

Findings

It was estimated that in 2015, 286 million (29%) people and 64 million (28%) women of childbearing age are located more than 2 hours from the nearest hospital. Marked differences were observed within and between countries. Only 17 countries had more than 80% of their populations living within a 2-hour travel time of the nearest hospital.

Conclusion

Spatial access to emergency hospital care provided by the public sector in Africa remains poor and varies substantially within and between countries. Innovative targeting of emergency care services is necessary to reduce these inequities. The accessibility results and assembled hospital database should be used to prioritize investments in emergency care service provision to achieve universal health access by 2030.
Governning cross-sector responses to climate change to protect health: Case studies of the World Bank, the World Trade Organisation and the World Health Organisation

Co-authors: Susannah Harding Mayhew-London School of Hygiene & Tropical Medicine; Michael Alexander Hammer-Keele University, UK; Sara van Belle-Institute of Tropical Medicine, Antwerp

Background

The importance of climate-change for sustainable development is increasingly recognised and manifest in the Sustainable Development Goals. The role of global institutions remains critical to ensuring global cooperation and action for public good, including health care for all as part of sustainable development. Yet, understanding of factors influencing how individual intergovernmental organisations are responding to the climate challenge is limited. This paper presents a comparative analysis of factors influencing organisational response to climate change and its implications for protecting global public health, in the World Bank, the World Health Organisation and the World Trade Organisation.

Methods

Drawing on cross-disciplinary approaches from organisational theory, systems thinking and governance/accountability scholarship, 107 documents were analysed from the three global organisations and 22 in-depth interviews conducted with representatives in senior and mid-level positions in each organisation.

Results

All three organisations recognise the relevance of climate change to their global public goods, including health, and development-orientated mission but their responses are very different. In the World Bank, multi-level leadership, diverse external engagement, dynamic learning and internal debate have consolidated structural and strategic changes and placed responses to climate change closely connected to health central to its development assistance. The WHO, despite high-level commitment, displays organisational inertia. Its narrow sector-specific focus inhibits engagement with global climate-actors and contributes to side-lining health as an issue affected by climate change. WTO'S consensus-principle decision making structures interact with the power interests of certain members to effectively constrain negotiation and discussion of climate-related trade issues which affect health.

Discussion/conclusions

Our findings show that the responsiveness of global organisations to climate change and their recognition of the need to address this to protect global public health, is a function of three clusters of factors: outward facing accountability and engagement with rapidly changing external stakeholders; leadership from top management supported by mid-level leadership; and dynamic learning capabilities informing strategic change. These factors collectively change how organisations think, and what they do, about climate change and the extent to which they are able to link this to global health concerns. Over time these factors may enable the emergence of cross-sector governance that protects health as part of wider action on sustainable development. Of the three study organisations, only the World Bank has gone some way towards a paradigm shift on how to achieve their organisational mission as a result of responding to climate challenges and so better protect global public health.
Enhanced surveillance and integrated approach reduced dengue incidence, Namakkal, Tamilnadu, India, 2017

Co-authors: Ramesh Kumar Govindarajan-Department of Public Health

Introduction: Highest burden of dengue is in India, accounting for 34% of global cases. Dengue cases started increasing in Namakkal district of Tamilnadu, India from July and peaked in October, 2017. District surveillance unit planned interventions to control outbreak. After two months, we evaluated the impact of our interventions.

Methods: We did an experimental study between October and December, 2017 in all 15 blocks. We defined a confirmed case of dengue as any patient with fever > 2 days and positive for IgM or NS1 antigen by Enzyme linked immunosorbent assay. We started daily fever surveillance in primary health centres, selected private hospitals and district hospital to increase sensitivity of dengue surveillance. We sent block level rapid response team (RRT) to resident area of fever cases. RRT conducted special medical camps, anti-larval work and fogging activities. RRT also did active surveillance, collected clinical samples from fever cases and sent samples to district public health laboratory. RRT along with help of local bodies chlorinated water tanks. Thus alkalinity of water was made unsuitable for larva breeding. We analysed data on weekly basis to identify high risk areas. District level officials randomly visited risk areas to check larval indices. House index, container index and bruteau index were checked after anti larval work was complete. Zonal entomological team also visited to cross check the larval indices. We promoted community participation by conducting meetings at village level and involving local bodies. We educated community to identify dengue larva and reduce breeding at household level. We conducted review meetings for health workers at district and block level every week to monitor anti dengue activities. We did paired t test to evaluate impact of interventions. We calculated mean differences(MD) in incidence of cases in different blocks between October and December, along with standard deviation(SD) and p value significant at &lt;0.01.

Results: Dengue cases increased from 117 in July to 554 in October, 2017(196 cases in August and 270 in September). We started our interventions in third week of October. Cases decreased in November (222 cases) and December (28 cases). Paired t test showed that interventions were effective at one month interval (MD: -22, SD=0) which was statistically significant (p&lt;0.01). At two months interval (December, 2017), mean difference of paired t test was -35 with SD=0(p&lt;0.01).

Conclusions: Dengue cases decreased following interventions in Namakkal district. We recommend continued surveillance and maintain interventions to prevent future outbreaks.
Papiya Mazumdar, Institute of Public Health Kalyani
Poster Number: 232

Multisectoral planning and stakeholder engagement for attaining public health resilience against environmental risks and vulnerabilities: A case study of Odisha, India

Co-authors: Papiya Mazumdar-Institute of Public Health Kalyani

Introduction: Global environmental commitments prominently feature in the Sustainable Development Goals spanning across six of the 17 goals with Goal 13 specifically referring to climate action and aims to reduce vulnerabilities arising out of and prone to climatic risks. Traditional approaches of planning and preparedness with health service provision is often inadequate to address health service needs and the complex scenario of health vulnerabilities arising from adversities in environmental system in which people live and work. While integrated planning for public health services, cross-cutting multiple sectors and involving non-traditional actors beyond health seems appropriate to meet these growing intricacies of health vulnerabilities in the face of climatic risks, evidence on such broad-based engagements among key players remain less-studied in developing country contexts. In this paper, we attempt to synthesize experiences from the climatically vulnerable state of Odisha in India, where the provincial government has strived to build health resilience through multi-sectoral coordination. Initiated before the SDG targets, lived experiences of Odisha for managing public health crisis emerging from vulnerable eco-systems gives suitable opportunity for recording success and failures of multisectoral actions for health system resilience.

Methodology: Evidence synthesis on Odisha’s multi-sectoral planning in health has been conducted using a research data triangulation approach, starting with an extensive review of published literature, government reports and other documents. This is supplemented with direct engagements with personnel from city-administration of the state capital through face-to-face in-depth interviews and other group-based methods like focus group discussion and interaction over multisectoral stakeholders’ meetings/workshops.

Results: Results indicate significant involvement of the municipal government in urban Odisha in disaster preparedness and developing strong health system mechanisms including vulnerability-mapping, assigned roles and strong use of information technology (IT)-enabled warning, monitoring and need assessment systems. Past experience of extreme climatic events has been catalytic to ensure a collaborative involvement of key stakeholders across both health and non-health sectors, and an efficient coordinating mechanism have been significant in ensuring wider participation. However, the extent of integrated planning for health varies across different urban areas indicating importance of local efforts. Identification of cross-sectoral indicators that could be monitored for progress against milestone on a regular interval are of primary importance to attain success.

Conclusion: The Odisha experience suggests that even in a developing country setting, multisectoral integrated planning for implementation and achievement of sustainable development could be attempted ensuring higher degree of success and strengthened public health system resilience.
Health systems that deliver for all during pandemics in the SDG era: Time-series analyses of primary healthcare delivery before and after Ebola in Liberia


Background: The aim of this study is to estimate the immediate and lasting effects of the 2014–2015 Ebola virus disease (EVD) outbreak on public-sector primary healthcare delivery in Liberia using 7 years of routine health information system data.

Methods and findings: We analyzed 10 key primary healthcare indicators before, during, and after the EVD outbreak using 31,836 facility-month service outputs from 1 January 2010 to 31 December 2016 across a census of 379 public-sector health facilities in Liberia (excluding Montserrado County). All indicators had statistically significant decreases during the first 4 months of the EVD outbreak, with all indicators having their lowest raw mean outputs in August 2014. Health system outputs lost during and after the EVD outbreak were large and sustained for most indicators. Prior to exceeding pre-EVD forecasted trends for 3 months, we estimate statistically significant cumulative losses of −776,110 clinic visits (95% CI: −1,480,896, −101,357, p = 0.030); −24,449 bacille Calmette–Guérin vaccinations (95% CI: −45,947, −2,020, p = 0.032); −9,129 measles vaccinations (95% CI: −12,312, −5,659, p = 0.001); −17,191 postnatal care (PNC) visits within 6 weeks of birth (95% CI: −28,344, −5,775, p = 0.002); and −101,857 ACT malaria treatments (95% CI: −205,839, −2,139, p = 0.044) due to the EVD outbreak. Other outputs showed statistically significant cumulative losses only through December 2014, including losses of −12,941 first pentavalent vaccinations (95% CI: −20,309, −5,527, p = 0.002); −5,122 institutional births (95% CI: −8,767, −1,234, p = 0.003); and −45,024 acute respiratory infections treated (95% CI: −66,185, −24,019, p = 0.001). Comparing December 2013 to December 2017, ACT malaria cases have increased 49.2% (95% CI: 33.9%, 64.5%, p < 0.001). Compared to pre-EVD forecasted trends, there remains a statistically significant loss of −15,144 PNC visits within 6 weeks (95% CI: −29,453, −787, p = 0.040) through December 2016.

Conclusions: The Liberian public-sector primary healthcare system has made strides towards recovery from the 2014–2015 EVD outbreak. All indicators tracked have recovered to pre-EVD levels as of November 2016. Yet, for most indicators, it took more than 1 year to recover to pre-EVD levels. During this time, large losses of essential primary healthcare services occurred compared to what would have been expected had the EVD outbreak not occurred. The disruption of malaria case management during the EVD outbreak may have resulted in increased malaria cases. Large and sustained investments in public-sector health system strengthening are needed for EVD-affected countries.
Gertrude Nyaaba, Academic Medical Center, University of Amsterdam

Poster Number: 234

**Tracing Africa’s progress towards implementing the Non-Communicable Diseases Global action plan 2013-2020: A synthesis of WHO country profile reports**

Co-authors: Gertrude Nsorma Nyaaba-Academic Medical Center, University of Amsterdam; Karien Stronks-Academic Medical Center, University of Amsterdam; Ama de-Graft Aikins-Regional Institute for Population Studies, University of Ghana, Legon, Ghana; Andre Pascal Kengne-Non-Communicable Diseases Research Unit, South African Medical Research Council & University of Cape Town,; Charles Agyemang-Academic Medical Center, University of Amsterdam

**Background:** The increasing rise of non-communicable diseases (NCDs) hinders the achievement of good health and wellbeing (Sustainable Development Goal 3) globally. Half of the estimated annual 28 million non-communicable diseases (NCDs) deaths in low- and middle-income countries (LMICs) are attributed to weak health systems. Current health policy responses to NCDs are fragmented and vertical particularly in the African region. The World Health Organization (WHO) led NCDs Global action plan 2013–2020 has been recommended for reducing the NCD burden but it is unclear whether Africa is on track in its implementation. This paper synthesizes Africa’s progress towards WHO policy recommendations for reducing the NCD burden.

**Methods:** Data from the WHO 2011, 2014 and 2015 NCD reports were used for this analysis. We synthesized results by targets descriptions in the three reports and included indicators for which we could trace progress in at least two of the three reports.

**Results:** More than half of the African countries did not achieve the set targets for 2015 and slow progress had been made towards the 2016 targets as of December 2013. Some gains were made in implementing national public awareness programmes on diet and/or physical activity, however limited progress was made on guidelines for management of NCD and drug therapy and counselling. While all regions in Africa show waning trends in fully achieving the NCD indicators in general, the Southern African region appears to have made the least progress while the Northern African region appears to be the most progressive.

**Conclusion:** Our findings suggest that Africa is off track in achieving the NCDs indicators by the set deadlines. To make sustained public health gains, more effort and commitment is urgently needed from governments, partners and societies to implement these recommendations in a broader strategy. While donors need to suit NCD advocacy with funding, African institutions such as The African Union (AU) and other sub-regional bodies such as West African Health Organization (WAHO) and various country offices could potentially play stronger roles in advocating for more NCD policy efforts in Africa. Successful implementation of these policy recommendations would not only reduce NCD related morbidity and mortality and thus contribute to improving the health and wellbeing of people but also contribute to reducing poverty as the extravagant costs associated with seeking healthcare further impoverishes nations, communities and people of lower socio economic status who are the most vulnerable to NCDs.
Helping Babies Survive in Jamaica: integrating workforce planning and training to respond to the needs of newborns and their families

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Background: Many strategies aimed at saving lives at birth have focused on problems at the point of care delivery without considering the systemic shortcomings in human resources for health (HRH) planning that resulted in those inadequacies in the first place. Further, these strategies often led to isolated impacts, which were not sustained when external funding expired because they had not been integrated into existing health systems. To address these challenges, our project focused on delivering a service-level provider training intervention – Helping Babies Survive (HBS) – and applying an integrated needs-based HRH planning approach to identify service gaps in newborn care in one Regional Health Authority (RHA) in Jamaica.

Methods: The project utilized a participatory, multi-method approach to implement the two components. The HBS training used train-the-trainer methods. The integrated needs-based HRH planning used a participatory action research approach to work with key informants to collect data required to run the service gap analysis, identify policy scenarios to address those gaps and test the scenarios.

Results/Discussion: Fourteen health providers from the RHA hospitals and community health centres completed the initial training workshop to become Master HBS trainers. Within the first six months, 26 additional health care providers were trained by the Master Trainers. Application of the HRH model identified specific data challenges that could be addressed by implementing systematic data-collection protocols. Additional consultations with stakeholders indicated that the determinants of the gap in the outcome of care currently being experienced are related to the structural components of accountability, communication and quality. Going forward, the system should be designed so that it espouses values of transparency, accountability, and ease of communication; is evidence-informed; preserves institutional memory and utilizes community assets to enhance end user care experience. The integrated health systems/health workforce planning approach provides the mechanism and communication tools for sustainable planning for team-delivered care around the needs of neonates and women and the competencies of the health workers to deliver the required care based on those needs.

Conclusion: This integration of the needs-based HRH planning with the implementation of HBS in one RHA in Jamaica demonstrated the effectiveness of HBS program in saving lives and the underlying need for more integrated MNCH HRH planning to ensure optimal reach and sustainability. This innovative integration of HRH planning and health services planning creates the right conditions to provide sustained effective essential care to newborns in Jamaica.

Funding: Grand Challenges Canada/CIHR
Building policies and action plans for human resources for health (HRH) in the Caribbean

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Purpose: To develop, in two countries, HRH policies and action plans that guide the planning of the health workforce based on the population's health-care needs.

Focus: Within the context of WHO's Global Workforce Strategy, the UN High Commission's Report on Health Employment and Economic Growth, and the Pan American Health Organization's Subregional Cooperation Strategy for the Caribbean, several Caribbean countries are committed to building capacity in needs-based human resources for health (HRH) planning, governance, and leadership.

Through a series of document/literature reviews and stakeholder engagements in two Caribbean countries, country-specific situational analyses were conducted and HRH policies and action plans were developed, as well as a monitoring and evaluation framework. Non-communicable diseases (diabetes, cancer and neoplasms) have emerged as the leading health conditions, along with vector borne diseases, communicable diseases and injuries, thus becoming areas of priority for their health systems. Results from the situational analyses indicated there are major gaps in the areas of human and non-human resources (especially specialised providers), communications across the health system, accountability frameworks, leadership and governance, legislation and regulations, retention/recruitment, deployment/use of the health workforce, and working conditions.

Many issues facing health workforce planning in these countries are shared across the Caribbean as well as other countries. Solutions to health systems strengthening include planning in a way that 1) reflects the population health needs, 2) is aligned with the strategic plans of the country, 3) engages multi-sectoral stakeholders throughout the planning and implementation processes, and 4) incorporates ongoing monitoring and evaluation. The HRH policy and action plans developed from the situational analysis provide a framework for determining the health workforce needed to achieve the objectives of the country's health system, based on the health care needs of the population.

Significance: While Caribbean countries face large gaps in their health systems, there is a recognition of the need to plan for the health workforce based on the needs of the population, and to include strengthened governance, partnerships, leadership, human resources for health information systems, and rigorous evaluation. An HRH policy and action plan that encompasses multi-sectoral mechanisms and the health needs of the population will create the conditions for sustainable capacity within the health system.

Target audience: policy-makers, decision-makers, providers, researchers.

Funding: Pan American Health Organization
Duane Blaauw, University of the Witwatersrand
Poster Number: 237

Analysing the employment decisions of health professionals over time: a ten-year follow-up study with professional nurses in South Africa

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Background

The inequitable distribution of health professionals, between urban and rural areas as well as between the public and private sectors, remains an important policy priority in many countries, including South Africa. Significant attention has focused on understanding the range of factors that influence health workers’ job choices. However, much of the existing research in human resources for health relies on cross-sectional surveys with current health workers. Such studies do not capture the dynamics of health professional employment decisions over time, or over the course of their careers. Even within longitudinal studies, traditional duration analysis focuses on the time to key employment changes rather than in analysing and comparing the complex patterns of health professionals’ actual job choices over time.

Methods

We draw on data from an innovative prospective longitudinal study established to monitor the career choices of a cohort of professional nurses in South Africa over time. 377 final year professional nursing students from seven nurse training institutions in two provinces were recruited into the study in 2008 and completed the initial baseline survey. The study participants were subsequently interviewed telephonically each year from 2009 to 2018 to provide information about their current job, employment changes, further training, working conditions, and job satisfaction. We used sequence analysis and the calculation of standard dissimilarity measures to represent and compare employment patterns over the 10 years since graduation. Data have been entered and analysed using Stata 14. The TraMineR toolbox in R was used for sequence analysis.

Results

We present the results from the first ten years of follow-up of the cohort. Loss to follow-up remains under 10% after ten years of observation. We describe the patterns of changes and dissimilarity metrics in relation to a number of key employment decisions including unemployment, sector of work, rural-urban location, type of health facility, and professional specialisation. We confirm the complex patterns and range of employment sequences for different groups of nurses even within a ten-year follow-up period. The observed employment patterns appear to be influenced by range of factors including individual socio-demographics (gender, rural origin, having children), professional training (type and location of training institution), and characteristics of the selected jobs (working conditions, salary).

Conclusions

Our study has demonstrated the usefulness for prospective longitudinal studies of health worker career choices in low- and middle-income countries, and the need for more complex methods to summarise and compare different employment patterns over time.
Does previous turnover behavior increase the odds of subsequent turnover intentions among nurses? Evidence from rural western China

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Background: Health workforce misdistribution is a major challenge faced by almost all countries. Nurse shortage is a severe problem in rural west China. A more profound understanding of the influencing factors of nurses' turnover intentions provide evidences for hospital managers and policy makers to retain the existing nurses in rural areas. This study aims to analysis the association between rural nurses’ previous turnover behaviors and current turnover intentions, and to identify other influencing factors meanwhile.

Methods: A cross-sectional survey was carried out in seven western provinces in China and 1158 rural nurses were included. Data were analyzed using the methods of descriptive analysis, Pearson’s chi-squared test, one-way ANOVA, and binary logistic regression analysis.

Results: Approximately 28.2% of rural nurses disclosed turnover intentions. 47.1% of rural nurses had previous turnover behaviors. Previous turnover behaviors of rural nurses were significantly associated with their turnover intentions (OR: 1.85, 95%CI: 1.34-2.56); further analyses indicated that the way and time of last turnover behavior were significantly associated with nurses’ turnover intentions. Meanwhile, a title of chief (associate) nurse (OR: 4.40, 95%CI: 1.43-13.54) and job satisfaction with effort-reward balance (OR: 0.77, 95%CI: 0.62-0.96) and social support from superiors (OR: 0.67, 95%CI: 0.55-0.83) were significantly influencing factors of rural nurses’ turnover intentions.

Conclusions: Turnover behaviors of rural nurses will further bring challenges on current situation of insufficient health workers in rural areas, hence influencing the sustainability of sufficient primary health care services for rural residents. As the most effective proxy predictor of actual turnover behavior, this study reported that approximately three in ten rural nurses in western China disclosed turnover intentions. Meanwhile, it demonstrated a significant association between previous turnover behaviors of nurses and their current turnover intentions. In rural nurses who had previous turnover behaviors, a 1.85-fold increase was seen in the odds of having turnover intentions. This remained significant and increased to a 6.97-fold increase for these rural nurses who moved between two same-level medical institutions within 4-6 years for the last time of turnover behavior. This study might shed light on nurse management in China.
Approaches to Motivate Health Workers in Low-And-Middle-Income Countries: A Systematic Literature Review

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Background: Poor health worker motivation remains an impediment to health access and quality in low-and-middle-income countries (LMICs). In order to address this human resource challenge, there is a need for evidence-based interventions to address health worker motivation. We undertook a systematic literature review to synthesize the scientific evidence on approaches used to motivate health workers in low-and-middle-income countries.

Methods: A key word search strategy was employed in five databases: PubMed, CINAHL Plus, World Health Organization Global Health Library, SCOPUS, and Embase between September 2007 and September 2017. Inclusion criteria included types of participants, intervention groups, the outcome measure, study design, and geographic location. Two independent reviewers screened 3,845 titles and abstracts and 269 articles that potentially met the study inclusion criteria were reviewed in full, also in duplicate. Only eight studies were retained for inclusion in the review. Data from these studies were abstracted using a standardized review form that assessed risk of bias, followed by narrative synthesis of findings.

Results: The eight studies included span six countries China, Ghana, Iran, Mozambique, Nigeria, and Zambia. Despite presenting outcomes of motivation in their results, five studies did not provide a definition for worker motivation and six studies failed to describe a theory of motivation informing the development of the instrument used to assess motivational outcomes. Most studies used a static group comparison or a pretest-posttest design and only three used a randomized design. Though some studies aimed to reach health workers more broadly, all interventions met our criteria to target nurses, doctors, and/or nurse-midwife cadres. While complex, the interventions fell broadly into four human resource management categories: supervision, compensation, systems support, and lifelong learning. Seven studies found little or no effect on motivational outcomes, and one study found a negative effect on health worker motivation.

Conclusion: There is very limited evidence on promising or successful interventions to motivate health workers in LMICs. Well-designed, robust studies that use reliable and validated tools to assess worker motivation are greatly needed in the SDG era. Higher intervention specificity with regard to workers’ sex, type of cadre, and position in facilities is needed as these factors are known to be associated with differing levels of worker motivation – the lack of specificity as to who received the motivation intervention for studies in our review may have obscured their true effects on select categories of workers.
When and how do incentives help improve Community Health Workers' performance? A qualitative multi-county study

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Background: In the era of global health initiatives, renewed attention is paid to community health workers (CHWs) as the interface between communities and health systems. The aim is to improve the health of underserved populations. When and how incentives contribute to improving CHW motivation and, ultimately, performance, is an ongoing debate to which this study contributes.

Methods: The REACHOUT programme undertook a qualitative context analysis regarding community health programmes in six countries across Asia and Africa (Bangladesh, Ethiopia, Indonesia, Kenya, Malawi, Mozambique). We performed a review of the international literature to develop a conceptual framework to serve as model for the factors influencing CHW performance. This guided a total of 250 semi-structured interviews and 65 focus group discussions, with CHWs, supervisors, health managers and selected community members. Transcripts were analysed by theme using a joint coding framework. A cross-country review of six country case study reports was performed, as well as a secondary analysis of the primary datasets, using Nvivo 10 qualitative data analysis software.

Results: Data showed that incentives were a major factor influencing motivation and performance. Monetary incentives were important to directly motivate CHWs and allow them to dedicate more time to their CHW role. Financial rewards also helped strengthening accountability between CHWs and the health system and CHWs and the communities they serve. Late or partial payment of promised incentives weakened accountability mechanisms and reduced programme effectiveness. Similarly, reward inequities across various types of CHWs in the same geographical setting disturbed functioning of CHWs.

Non-financial incentives (material and immaterial) also contributed to motivation and performance; sometimes dependent on and sometimes independent from accompanying financial incentives. In turn, the impact of financial incentives seemed to rely on the presence of other (non-financial) incentives, as well as an enabling environment in terms of the wider human resources context.

Discussion and conclusions: Incentives in most contexts help shape CHW performance. This process is influenced by a number of factors, including (i) whether CHWs are volunteers or salaried staff, (ii) the degree of integration into the health system, (iii) community ‘ownership’ of CHWs, (iv) the incentive ‘package’ (combination of types of incentives), (v) (perceived) inequities in incentives received, and (vi) enabling factors, such as supportive supervision, appropriate means of transport, a functioning supply chain and continuous professional development opportunities. Community health programme design should take these issues into account, as well as the, often increasing, CHW work load.
Assessing healthcare worker reform policy interventions in pursuing health for all in a Zimbabwean peri-urban community: a Decision Space Approach

Background: Human Resources for Health (HRH) reform policy interventions are an important aspect of the Health Sector Reform Agenda in pursuit of health for all in resource-constrained peri-urban communities. Not only does it help address the global health workforce crisis revealed by the 2006 World Health Report but also contributes towards equitable distribution, availability, accessibility, competency and motivation of health human resources as prescribed by the 2030 Global Health Workforce Strategy in pursuit of Goals 3 of the 2030 Sustainable Development Agenda. Global progress in this Sustainable Development Agenda era presents an opportunity to reinforce effort towards social inclusion and health for all through innovative research approaches and measures that help assess performance of interventions in peri-urban areas. We used the Decision Space Approach to analyse decision space, innovation, and performance in HRH reform policy interventions in Epworth, a peri-urban community in Zimbabwe.

Methods: The study design was exploratory and cross-sectional. In this, we firstly explored the healthcare worker reform policy at the principal level to determine the main policy result areas. Findings enabled us to develop an HRH Decision Space Mapping Analysis Conceptual Tool consisting of six main policy result areas. We then used it to analyse decision space, innovation, and outcomes towards healthcare worker reform at the agent level in Epworth. Interpretive thematic analysis and descriptive statistics were used to facilitate analysis.

Results: Narrow decision space in the implementation of the Human Resource for Health Policy (2009-2014) enabled the Ministry of Health to engage donors through strategic partnerships that helped initiate healthcare worker reform. Centered decision space also facilitated the implementation of the labour relations framework, training, performance management, safety, and human resource information. Functional innovation in moderate decision space helped mitigate local incapacities in health worker deployment, retention and financing. However the realization of desired outcomes from decision space was undermined by local incapacities.

Conclusions: Using the HRH Decision Space Mapping Analysis Conceptual Tool developed from this study, it was concluded that whilst narrow decision space may help initiate the reform process, functional innovation helps mitigate capacity constraints. However, building capacity may help maximize innovation and performance in actors’ decision space. Future research may adopt this Conceptual Tool to facilitate analysis of decision space, innovation, and performance in the six result areas of health personnel reform policy towards health for all in peri-urban communities in the Sustainable Development era.
Effect of Human Resource for Health (HRH) mentorship on Emergency Obstetrics skills transfer of lower cadre health workers

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Background

Human Resources for Health (HRH) play a central role in achieving Universal Health Coverage (UHC). Global HRH shortages have led to significant workload pressures, particularly in tertiary facilities, which have disastrous implications for health outcomes and economic growth. In Bungoma County, Kenya, there are 1,785 health care workers (HCW) against the 2,200 needed but 90% of the county’s annual health budget is already allocated to salaries, making further recruitment impossible. Bungoma is one of the 10 highest burden counties on maternal deaths in Kenya.

To address these challenges, the Maternal and Newborn Improvement (MANI) project and Bungoma County Department of Health implemented a rotational mentorship programme in high volume Comprehensive & Basic Emergency Obstetrics & Newborn Care facilities to build the skills of HCWs in obstetric emergencies and partially address staff shortages.

Methods

HCWs from lower level facilities who meet specific criteria are invited to work at busy tertiary hospitals and cover round-the-clock childbirth duties at the maternity ward. Staff working at the tertiary facilities provide hands-on mentorship support to the visiting HCWs whilst performing their regular duties. A qualitative assessment with managers, mentors and mentees was conducted in July 2017 to evaluate the short-term impact of the programme.

Results

230 HCW’s participated in conducting 2,329 deliveries between March to July 2017 reducing the heavy workload and pressure at the tertiary facilities. The mentorship programme ensured that the facility is covered with adequate HRH 24 hours a day. Mentees gained new skills and confidence in treating cases usually referred up to high volume facilities. The tertiary hospital staff reported improvement in referral protocols and enhanced interfacility interaction. The mentorship program won the Country first lady’s Beyond Zero award last year as an innovative programme that addresses simultaneously HRH challenges and skills development.

Conclusion

The EmONC mentorship programme is an innovative, successful and cost-effective response to HRH gaps while also improving the quality of maternity care through skills strengthen. Mentorship is a recommended adjunct to classroom based training, and should be scaled up as a sustainable approach to building HCW capacity.
Transformer TB service delivery model in China: Issues and challenges for health workforce

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Background

China's TB control system has been transforming its service delivery model from CDC-based model to designated hospital-based model to combat the high disease burden of TB. This study aims to identify the implications of service model transformation on TB health workforce development, with the hypothesis that the new service delivery model are expected to have more health workers with better knowledge and better motivation than the old system.

Methods

The study applied mixed methods in three provinces of China (Zhejiang, Jilin and Ningxia) to answer the research questions. Institutional survey on designated hospitals and CDCs were conducted to measure the number of TB related health workers. Individual questionnaire survey were conducted to measure the composition of health workers, their income and knowledge. Key informant interviews with health managers and Focus Groups Discussions (FGDs) were organized to explore policies in terms of recruitment, training, and motivation.

Results

The three provinces of Zhejiang, Jilin and Ningxia had 0.30, 0.97 and 0.92 TB health professionals per 10,000 population respectively, and met the national standard of 0.2. County designated hospitals recruited TB health professionals from three different sources, namely, other department of the same hospital, existing TB health professionals who used to work in CDC, and from township health centers. Most newly recruited TB health professionals had limited competence. TB doctors got 67 out of 100 scores from TB knowledge test, while public health doctors got 77. Most of them were put on fixed posts to only provide TB outpatient services. TB professionals had an average monthly income of 4587 Yuan. Although the designated hospital had special financial incentives to support the TB health professionals, they still had lower income than other health professionals, due to their limited capacity to generate revenue through service provision.

Conclusions

The service-revenue based financing mechanism in designated hospitals and the job design of fixed post do not provide sufficient incentive to attract qualified health professionals and motivate them to provide high quality TB health services.
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Poster Number: 244

10% vs. 90% Gap: Case Study of Disparity in Distribution of Human Resources for Health in a Sub-national Region in Nigeria in the Era of Universal Health Coverage

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The comparative density of doctors and nurses to the population has been identified as a strong predictor of health outcomes and quality of healthcare available to individuals and community. For the planning and implementation of Universal health coverage in LMIC, there is need for available and continuous monitoring of the distribution of such highly skilled health personnel. However, there is paucity of data on the distribution of doctors and nurses between the rural and urban area in tropical regions such as Nigeria. Our study aimed to assess the distribution of doctors and nurses between the urban and rural area in a state in south-east, Nigeria.

A situational analysis of available data on the number and distribution of doctors and nurses from the ministry of health was carried out. This data was triangulated with data from the register of doctors and nurses from their respective associations in the state. Ethical clearance was gotten from the London School of Hygiene and Tropical medicine and Ebonyi State University, Abakaliki. Descriptive statistics was carried out using frequencies and proportions. Data Analysis was carried out using IBM SPSS version 20.

Out of 1,803 healthcare workers (doctors and nurses) available in the state, 1,609 (90%) were based in the urban area compared to 194 (10%) in rural area. Majority of the health workers 1,609 (90%) were serving 149,683 (4%) of the total population of the state (urban dwellers) as against approximately 194 (10%) of the workforce who were serving the remaining 2,027,264 (96%) of the population (rural dwellers). Furthermore, the healthcare worker - population density for the urban area was found to be 1075 per 100,000 as against 10 per 100,000 in the rural area.

Compared to the last national Human Resource for Health survey a decade ago, it appears there is a worsening trend by over 30% in the inequitable distribution of HHCs to rural areas with urban dwellers having a 100 fold chance to access to health care workers compared to rural dwellers. Again, the health worker-population density for urban areas was about 6 times above the recommended WHO level in sharp contrast to the rural area which was about 20 times less. All this calls for urgent measures by government and their international partners to redress this inequity.
A Registry Analysis of Return Migration of South African physicians from the United Kingdom

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Introduction: There is interest in the return migration of health workers from developed to developing countries, but very little data on the extent of such, with the assumption that return migration is minimal. The objective of this study was to employ an attrition-based analysis to estimate the quantity and characteristics of South African-trained physician return migrants from the United Kingdom, the largest recipient of SA trained doctors.

Methods: An attrition-based model was constructed for physicians who had attended medical school in South Africa (SA) and had previously immigrated and attained a license to practice with the United Kingdom (UK) General Medical Council (GMC). Physicians that dropped out of the GMC’s database were cross-referenced (by name, medical school and year of graduation) with the registry of the Health Professions Council of South Africa; physicians who were above the age of 65 when dropping out, were shown as deceased or retired, or were registered as active practitioners in Canada, the United States, Australia or New Zealand were removed from analysis. Physicians with a non-South African reference address on the HPSCA database were also removed from analysis.

Results: There were 17,680 physicians registered with the UK GMC 1991-2017. Of those, 5,032 (28.4%) have dropped out before retirement age and are estimated to be currently practicing in South Africa, composing 11.2% of all SA-registered physicians. This is concurrent with a decline in the quantity of SA physicians in the UK since 2003; 49.9% of all physician attrition from the UK amongst SA trained physicians in that period is accounted by return migration.

Females were 9% more likely to return than males (RR 1.09, p=.005, CI 1.03-1.17). Individuals who graduated before the end of apartheid in 1991 were 53% less likely (RR 0.47, p<.001, CI .45-.49) to return as those who graduated afterwards. However, physicians that graduated from white-segregated medical schools were 190% more likely to return as those that graduated from other medical schools before the end of apartheid (RR 2.9, p<.001, CI 2.43-4.70).

Conclusion: This model demonstrates a large degree of turnover of South African physicians in the United Kingdom with nearly one-quarter returning to South Africa. This cohort is younger and largely female. LMICs should install mechanisms for identifying return migrants to improve reentry and prevent re-emigration. Further analysis will identify economic, political, and health systems factors that affected re-emigration rates.
What motivates primary health care workers to perform well in resource-limited settings? Insights from realist evaluation of health systems strengthening in Nigeria

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Background: In December 2012, a renewed global focus on Universal Health Coverage (UHC) culminated in the adoption of a UN General Assembly resolution that endorsed the need for well-trained, adequately skilled and motivated Primary Health Care (PHC) workers. While there is abundant literature on production of health workforce to ensure access to and utilization of health services, the existing literature on key factors that motivate PHC workers to perform well is limited particularly from resource-constrained countries. This presentation aims to present contextual factors at individual, organizational, societal and systems levels that influence PHC workers motivation, based on insights from Nigeria.

From 2012 to 2015, the Government of Nigeria implemented a social protection programme to improve the lives of vulnerable mothers and infants. The programme included upgrading infrastructure, providing supplies, recruiting and training PHC workers (2,000 midwives and 10,000 community health workers), and providing financial incentives to pregnant women to promote access to maternity services.

Methodology: From June 2015, we used a realist evaluation design combining documents review, 63 semi-structured interviews, 12 focus group discussions, facility exit survey and secondary analysis of facility data, to assess the sustainability of programme effects in Anambra State, south-eastern Nigeria. We used a realist analytical framework involving theory testing, theory verification, and theory consolidation to understand how the context of implementation shaped workers’ motivation.

Results: A complex interplay of individual, organizational, system/societal factors affected staff motivation in Anambra State during programme implementation. Individual-level motivators were PHC workers’ love of their vocation and welfare of patients. Organizational motivators included on-the-job training, supportive supervision and increased availability of staff, medical equipment, drugs/supplies at health facilities. Societal motivators included community appreciation for and recognition of workers’ roles. Though termination of the programme from 2016 caused significant material resource and staff shortages at organizational level, yet, individual and societal motivations have been sustained. Prominent dissatisfaction factors were lack of security and staff accommodation at facilities, which increased workers’ vulnerability to attacks and reluctance to work at night. Other dissatisfaction factors were poor workforce policies that prevent replacement of retired workers, and lack of ambulances to transfer complicated cases to specialist healthcare facilities.

Discussion/conclusion: Lack of security and material resources constrain the motivation of PHC staff to provide round-the-clock maternity services and hinder achievement of UHC. We recommend context-specific interventions, including improving PHC workforce security and feasible changes in policy, to improve motivation and hence improve quality of services.
What drives effective immunization at community level?

- A participatory action research and its formative evaluation

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Background

In 2005, Nigeria adopted the Reach Every Ward strategy to improve vaccination coverage for children, 0-23 months. By 2015, Ogun state had immunization coverage of 107% in 12 of its 20 local government areas but eight had pockets of unimmunized children, with the highest burden (23%) in Remo-North. Factors contributing to this trend were not known. Participatory evaluation and action research (PAR) was introduced to provide context-specific solutions to factors hampering immunization in Remo-North. Formative evaluation assessed the relevance, efficiency and effectiveness of the PAR.

Intervention design

PAR was implemented in the best (Ipara) and worst (Ilara) performing wards in Remo-North. Results at baseline were validated and discussed in dialogues between community members, health workers and local government officials to develop Joint Action Plans, implemented in two 4-month action phases. Endline assessment was conducted after one year.

Evaluation design

A pre-test/post-test study was conducted using mixed methods. This included a survey among caregivers of under-five children; secondary analysis of the Health Management Information System (HMIS); cost-effectiveness analysis; in-depth interviews with policy makers, local government officials, community stakeholders and health workers; and focus group discussions with community members.

Results

Immunization coverage increased significantly at endline (90.9%) compared with 60.7% at baseline for both wards. HMIS data showed that coverage increased significantly in Ilara (26% to 59%). For Ipara, coverage for all the antigens except measles remained high. Significant decline in measles coverage (76% to 59%) was ascribed to HMIS recording patterns, cultural barriers and reduced utilization of the Ipara facility partly due to revitalization of the Ilara facility. The intervention was found to be cost-effective only in Ilara. Improved functioning of Ilara health facility and reinstitution of antenatal care and delivery services were important drivers of immunization utilization in the ward. Significantly more caregivers visited health facilities for immunization at endline (83.2%) than at baseline (54.2%) in both wards. Community linkages to immunization were strengthened and health workers displayed increased responsiveness in their availability and behaviour especially in Ilara. Dialogues/action group leadership appeared to be more effective in the more cohesive and rural Ilara and conflict within the Ipara group seemed to contribute to its under-performance.

Conclusion

The joint-learning and action approach achieved contextual solutions to problems identified in Ilara and Ipara to varied extents. A longer implementation time accompanied by research will provide more insight into the positive effects of the dialogues and action, and the intervention’s transferability.
Leveraging community linkages to improve immunization coverage in Plateau District, Benin

Context

A Performance-based Financing (PBF) program was implemented in Benin from 2012-2017. After five years, service delivery, particularly immunization coverage, had not significantly increased. To understand the low uptake of immunization services, in June 2017, Gavi funded a case study to compare a poor performing zone, Sakété-Ifangni, against a high-performing health zone (HZ), Bembérékè-Sinendé. Subsequently, we conducted an intervention to address the challenges in Sakété-Ifangni, which has failed to meet its annual immunization coverage targets four times over the last six years despite PBF.

Methods

To understand the key factors that contribute to the utilization and quality of services under the PBF model in Benin, a multiple case study design was used. Data was collected from multiple sources, including document reviews, in-depth interviews, and focus group discussions.

A participatory approach, under the leadership of the district director of health, involving health workers, community representatives, and local NGOs, was employed to collect data. Immunization data from poor performing HZ were analyzed, after which a brainstorming session was held with stakeholders to determine how to address barriers to vaccination service utilization.

Results

Results of the case study showed that in the high-performing HZ there is regular community dialogue between health centers communities. Health center leadership is characterized by strong management and organization with resources from district and community. PBF implementation was well understood by health workers and benefited from sound financial management.

The intervention framework was developed in October 2017 and implemented in January-February 2018. In Sakété-Ifangni HZ, communities and health centers:

- Appointed community health workers to sensitize families and track children requiring vaccination services;
- Selected two health agents in charge of vaccination services per area to ensure continuous services and intensify community outreach;
- Reinforced the capacity of nurses, by training and coaching, to provide efficient vaccination; and
- Enforced periodic supervision to all health centers by district managers.

Initial results comparing immunization coverage data from January 2017 to January 2018 show a significant increase. In the areas of Towe, Kpoulou and Sakete 2, Bacillus Calmette–Guérin (BCG) immunization coverage increased from 38%, 6%, and 49% to 93%, 33%, and 93%, respectively.

Conclusion

Based on the results of the study and evidence from the subsequent intervention, it is highly effective to link health and community leaders to address immunization challenges, including strong leadership and strengthening health workers capacities. Sustainability was enhanced by using local resources and promoting ownership.
Implementing a Quadripartite Memorandum of Understanding to Achieve Sustained Financing for Routine Immunization in Bauchi State, Nigeria


Background: The percent of children fully immunized by their first birthday in Bauchi State, Nigeria was 13 percent in 2013. Recognizing reforms were needed to mobilize and coordinate resources to address the low immunization coverage rates, Bauchi State Government entered into a three year Memorandum of Understanding (MOU) with the Bill and Melinda Gates Foundation (BMGF), the Dangote Foundation and the U.S Agency for International Development (USAID) in 2014. The purpose of the MOU was to establish sustainable financing for the Bauchi State immunization program and ultimately improve vaccination coverage rates. The MOU aimed to achieve this goal by first assessing the costs to making the program fully functional at all levels and then establishing a separate basket fund account that would enable the foundations to contribute to the full operational costs of the program. To foster sustainability, the MOU stakeholders agreed to a plan whereby the foundations provided 70% of the funds in the first year and the State contributed 30%. The State was required to increase its contribution over time while the foundations reduced their contributions. USAID contributed to the agreement by providing technical assistance to the State to improve program performance.

Methods: We conducted a case study of the Bauchi RI MOU experience. The data collection process included document reviews, in depth interviews (N=36), and outputs of a participatory workshop aimed at generating consensus on components of the MOU among key stakeholders. Data from the different sources were analyzed using time series analysis and thematic analysis techniques.

Results: The Bauchi RI MOU was signed in 2014 and a basket fund was opened to support operational costs for the immunization program. The State engaged with partners to develop a harmonized RI workplan which was reviewed and updated quarterly based on performance. The harmonized RI workplan enabled the State to ensure that resources were coordinated and use efficiently to address system needs. Periodic audits were conducted to ensure that funds were being applied as determined and the Bauchi state government and partners contributed to the basket fund as outlined in the MOU.

Conclusions: The Bauchi RI MOU introduces an innovative approach to leveraging private sector resources to foster coordination, improve planning and strengthen political commitment for public health priorities such as immunizations. While financing will likely continue to be a challenge in Nigeria, the MOU provides a model for partners to engage in strengthened coordination for public programs.
How can Geospatial Data be used to Strengthen Routine Immunization in the States of Bauchi and Sokoto, Nigeria?


Background: Reaching eligible children for immunization requires details on where, when, and how immunization services are being delivered. Current practice in Nigeria is to record population and settlement location information manually which, relies on outdated census population estimates and imprecise settlement location. The information on hand drawn maps determine resource needs such as vaccine quantities, numbers of health workers, types and numbers of outreach activities, and transportation. The Maternal and Child Survival Program (MCSP) is working with the State Primary Health Care Development Agency (SPCHDA) in Bauchi and Sokoto States, Nigeria to use geographic information systems (GIS) in six local government areas (LGAs) to more efficiently and accurately capture population estimates, health facility location, and road networks to produce primary health care (PHC) health facility catchment area maps for routine immunization (RI).

Method: We conducted participatory workshops with SPHCDA staff at the State (N=15), LGA (N=50), and ward level (N=120) to solicit feedback on GIS generated maps. Through structured exercises, we guided respondents through a comparison of the hand drawn and GIS generated maps. Moderators and note takers captured details on participant perceptions of accuracy and usability through observation. Process documentation will be used to capture how the final GIS maps are created and processes for validation of the GIS maps by end users.

Results: Maps were produced for 272 health facilities. Identification of settlements which was based on existing settlement lists with the SPHCDA were complemented with new settlements derived from satellite images and geocoordinates were captured for both. Population estimates from Landscan based on GIS and remote sensing were assigned to each settlement. After plotting the settlements on PHC maps, a number of duplications were identified that will be reconciled through end user validation meetings scheduled in March 2018. Findings from participatory workshops indicate that the SPHDCA are receptive to the GIS generated maps. However, several suggestions were made to help improve usability including developing a more detailed legend with context appropriate icons and increasing the size of the maps.

Discussion: This study will inform stakeholders on the process required for producing GIS maps for routine immunization planning. In addition, updated population estimates and more accurate settlement location data will enable better targeting of outreach services and improve resource allocation.
Using cost evidence to achieve immunization systems that deliver for all: systematic review findings on immunization delivery costs from low- and middle-income countries

Co-authors: Kelsey Vaughan-ThinkWell

Background

Immunization programs that deliver for all require sustainable and predictable financing to achieve equitable, high-quality coverage of life-saving vaccines. However, translation of cost evidence into planning, budgeting, and policy-making at country level is challenging. Cost data are fragmented, of variable quality, and/or difficult to understand and use.

Methods

ThinkWell conducted a systematic review of immunization delivery cost studies published in the grey and published literature between January 2005 and January 2017. Data from 53 total resources were extracted, resulting in 194 unit costs (cost per capita, dose, fully immunized child, and person in the target population) across 30+ low- and middle-income countries. ThinkWell developed an Immunization Delivery Cost Catalogue (IDCC) to house the extracted unit cost data in 2016 U.S. dollars.

Using new methods for pooled cost analysis, comparable unit cost data were combined to develop more than a dozen unit cost estimates for delivering specific vaccines (e.g., HPV) or types of vaccines (e.g., injectable vaccines), by delivery strategies (e.g., mobile/outreach delivery) and for specific settings (by country income levels and regions).

Results

The IDCC presents the most comprehensive, current, and comparable global evidence on costs of immunization delivery and is intended to support national and sub-national stakeholders and international partners in planning, budgeting, advocacy, research, and related efforts. Half of the data come from low-income countries, nearly all from Sub-Saharan Africa, with the remaining bulk (41%) from lower-middle-income countries. Nearly all vaccines and vaccination schedules are represented. Almost 60% of data is associated with health facility-based delivery. More data is available about incremental costs (53%) than full (40%), and economic (51%) versus financial (32%) or fiscal (5%) costs.

The pooled cost estimates show a wide range of immunization delivery costs and highlight the paucity of comparable data. The incremental financial costs of adding an injectable vaccine such as PCV or HPV to a schedule are $0.16-$3.07 per dose (without vaccine) in low income settings; when considering economic costs, costs increase to $0.62-$4.34. The supply chain-related full, economic costs of delivery of schedules containing 5-7 antigens are $0.22-$2.78 per dose.

Discussion/Conclusions

Our research demonstrates numerous gaps in immunization delivery costing data and wide variation in delivery costs across country contexts and delivery strategies for different vaccine schedules and new vaccine introductions. The analysis has produced useful pooled cost estimates to support country-level planners in budgeting for immunization delivery, helping ensure strong immunization programs that can deliver for all.
Sadie Bell, London School of Hygiene and Tropical Medicine
Poster Number: 252

Examining the value and effectiveness of National Immunization Technical Advisory Groups (NITAGs) in low and middle-income countries: a multi-method qualitative study

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Background

A 2020 target of the Global Vaccine Action Plan is for each country to establish or have access to a National Immunization Technical Advisory Group (NITAG). NITAGs’ role is to produce recommendations based on evidence to guide national immunisation policies and programmes, with consideration of local contexts. Despite considerable progress in establishing and strengthening NITAGs, in 2016 around a third of low and middle-income countries (LMICs) did not have a NITAG and almost two-thirds of LMICs reported having a NITAG that was not meeting performance indicators included in the WHO/UNICEF Joint Reporting Form. This study aimed to explore the value and effectiveness of NITAGs in LMICs, identifying areas in which NITAGs may require further support.

Methods

We used a multi-methods study design including 134 semi-structured key informant interviews with 45 global and 89 country-level participants in 25 LMICs, literature and document reviews, and 5 NITAG meeting observations. Participants included NITAG members and representatives of national immunisation programmes, the World Health Organisation, Gavi the Vaccine Alliance, the Bill and Melinda Gates Foundation, and US and European Centres for Disease Control. Additionally, 82 literature sources were included, referring to NITAGs in 29 LMICs. Data were analysed thematically, drawing on categories from the Evaluation Tool for NITAGs.

Results

Participants indicated that NITAGs were valuable in promoting vaccination programme decision-making based on evidence and local context, thereby enhancing national immunisation programme sustainability and strength. Well-functioning NITAGs were a trusted resource for health ministries and enhanced country ownership, gaining wider responsibilities such as commissioning research, building economic evaluation into decision-making, and contributing to communications on immunisation to the public. NITAG effectiveness was compromised in some countries by: (i) unreliable funding; (ii) insufficient data synthesis expertise amongst members, particularly reported in smaller countries; (iii) challenges in accessing and using evidence to produce recommendations; (iv) lack of transparency; (v) inadequate procedures to manage conflicts of interests; and (vi) limited integration with national decision-making processes, which reduces the recognition and incorporation of NITAG recommendations.

Conclusions

LMIC NITAGs have developed significantly in the past decade. However, to achieve global NITAG targets and increase their effectiveness, further support is crucial. This study highlighted that NITAGs need additional technical and funding support to maintain quality and impartiality while ensuring sufficient integration with national decision-making processes. Potential means of support include mentorship by mature NITAGs and technical assistance through the World Health Organisation and the Global NITAG Network.
Alice Hazemba, University of Zambia, School of Public Health
Poster Number: 253

**The Saving Mothers, Giving Life (SMGL) Initiative: Community Perspectives and lessons from Selected districts in Zambia**

Co-authors: Alice Ngoma Hazemba - University of Zambia, School of Public Health

Introduction: The Zambian and USA Governments implemented the Saving Mothers, Giving Life (SMGL) initiative in six intervention districts from 2012-2015. The goal was to reduce maternal deaths by 50% through strengthening delivery skills of health care workers (HCWs), increasing health facility delivery (HFD), mobilizing communities to increase birth preparedness and complication readiness, and strengthening health facilities (HFs) to provide quality maternal and new-born health (MNH) services for normal and complicated deliveries. The HF indicators improved: MMR reduced by 55%; Perinatal Mortality (PNM) 45% and HFD increased by 85%. Verification of this success from the communities' and the HCWs' perspective was deemed necessary. This study explored knowledge and perception of access and utilization of MNH services during the SMGL interventions.

Methods: The study was conducted in six intervention districts. Participants included women who delivered at the HF or home, men whose wives/partners used a HF or home to deliver, Community volunteers, Community Leaders, HCWs and Public Health stakeholders. Individual interviews and Focus Group Discussions were conducted. Purposive sampling was used to select HFs and participants. Data were managed using NVivo 10.

Results: The analysis was guided by the Three Delays Framework. Three thematic areas emerged: knowledge and perception of key messages on safe motherhood to increase demand for MNH services (1st delay); perception of improvement of access and utilization of high impact MNH services (2nd delay); and perception of quality of MNH services delivery (3rd delay). Discussion: Although there were gaps in the implementation, the SMGL initiative provides lessons and opportunities for future interventions aimed at behaviour change to increase demand, access and utilization of MNH services in this and similar settings. Community mobilization provided a platform to empower women and their families with knowledge on key messages on pregnancy and child birth to improve health seeking behaviour. Knowledge of danger signs during pregnancy and child-birth as well as birth preparedness and complication readiness was widespread although geographical barriers still hindered women to access and use of MNH services. While construction and renovation of maternity wings and Maternity Waiting Homes (MWHs) was reported to improve access in some sites, some women still delivered from home. However, skills training, coupled with supply of essential equipment and commodities improved MNH service delivery once women reached the HFs. Conclusion: Community awareness of key messages on safe motherhood improves health seeking behavior in resource limited settings.
knowledge and practice of women about maternal health in an underprivileged community of Bangladesh

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Introduction: Every year around 5500 mothers are dying due to maternal complications in Bangladesh. A large number of deaths are still occurring in the marginalized community. Women living in the hard to reach tea gardens areas in Moulvibazar district are struggling with early marriage, adolescent pregnancy, and poor health-seeking behavior during pregnancy period.

Objective: The study was done to assess knowledge and practice of women on maternal health living in the tea garden community of Moulvibazar district, Bangladesh.

Methods: A cross-sectional study was conducted in tea gardens Moulvibazar districts. Twenty-five out of 92 gardens were selected purposively. A total of 529 mothers aged between 15-49 years who had a live birth between 1 March 2015 and 29 February 2016 were enrolled. A structured pre-tested questionnaire was used for face to face interview. Descriptive analysis was performed using SPSS 21 for windows.

Results: The study revealed that over 56% of the women aged between 20-49 years had no knowledge about antenatal care (ANC), only 8% mothers were aware of recommended four ANC. Whereas, 51% of women aged between 15-19 years also unaware of ANC and only 6% mothers were aware of four ANC. About 77% of mothers had their last delivery at home, 35% of them performed by the garden health care provider (paramedics) and rest of them conducted by untrained birth attendant. Only around 18% of the mothers had their post-natal care in the last pregnancy and 44% don't have any ideas of maternal complications during pregnancy.

Conclusions: Specific intervention focusing improvement of knowledge and practices of women on maternal health issues can help to improve overall maternal health status of this marginalized group.

Keywords: Maternal health, Teagarden community, Bangladesh
Impact Evaluation of Nigeria Maternal, Newborn and Child Health Weeks

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Background

Due to insufficient progress in reaching Millennium Development Goals 4 and 5, the Nigeria Federal Ministry of Health approved and prioritized the implementation of the Maternal Newborn and Child Health week (MNCHW) to accelerate progress. The MNCHW is a week-long, bi-annual one-time delivery mechanism aimed at strengthening and consolidating routine Primary Health Care (PHC) services and significantly increasing coverage of core preventive and curative interventions that can improve health of mothers and children.

After 5-years of MNCHWs implementation, an impact evaluation (IE) was commissioned to 1) Assess the extent to which the MNCHWs have been implemented as intended, 2) Evaluate the extent to which the MNCHW has been adapted to the needs of intended target groups, 3) Assess whether the intended outcomes of the MNCHW were achieved, and whether there were unintended outcomes, 4) Identify lessons learned, and 5) Make recommendations to strengthen the MNCHWs.

Method

An evaluability assessment concluded that, a credible, reliable and useful IE could be conducted. The IE was conducted using Theory based approach, specifically contribution analysis. The MNCHW Theory of Change (ToC) was refined and validated by stakeholders.

Twelve states and the FCT were systematically but purposefully selected for data collection.

Primary data was collected from a household survey-(n=5,389), key informant interviews-(46) and focus group discussions-(28) were carried out. Secondary data was extracted from relevant reports, data sets and publications.

Results

Since inception the MNCHWs has not been implemented according to the MNCHWs implementation guidelines. Only 27.8% of women and children under 5-years in the HHS participated in the MNCHWs preceding the survey. The odds of attending the MNCHWs was 50 times more in women who were aware than those who were unaware of the MNCHWs (OR 47.3, 95% CI 34.6, 64.4). There was no evidence that the MNCHW has significantly contributed to coverage of essential MNCHW interventions or improved MNCH outcomes. Other key findings were poor political commitment to funding, inconsistent implementation approach, dependency of PHC functioning on MNCHWs, weak MNCHW implementation monitoring system, ineffective social mobilization strategy, negative effect of immunization-plus-days on MNCHWs planning and implementation, and poor training of health care workers.

Conclusion

The intended outcomes of the MNHWs have not been achieved and the PHC system has not been strengthened.

Thirteen policy and operational levels recommendations were made to improve its implementation and phase-out to allow for full implementation of a new national PHC policy in the SDG era.
Effectiveness of Participatory Community Solutions (PC-Solutions) Strategy on Improving Maternal and Newborn Health Care Behavior and Practices: A Propensity Score Matched Difference-in-Difference Analysis

Co-authors: Nebreed Fesseha Zemicheal-JSI/L10k2020; Gizachew Tadele Tiruneh-JSI/L10K2020; Lisanu Tadesse GebereMariam-JSI/L10k2020; Wuleta Aklilu Betemariam-JSI/L10K2020; Ali Mehryar Kerim-JSI/L10K2020

Background: Despite national efforts to reduce maternal and neonatal mortality by increasing community access to high impact interventions, utilization and quality of maternal and newborn health (MNH) services are at lowest level. Community engagement is a compelling strategy for improving quality of services and building resilient health system. However, community engagement strategies for quality improvement are not properly strategized and implemented through effective community participation.

Participatory Community Solutions (PC-Solutions) strategy is a four-step quality improvement (QI) process, Plan-Do-Study-Act cycles, implemented in eight primary health care units of Ethiopia to improve utilization and quality of MNH services. The innovation joins communities with facilities and extends to include an approach that fosters a community responsive health system. Tailored interventions were designed through consultation with healthcare providers and communities. A QI team was formed that include providers, health extension workers, community volunteers, representatives of hospital, local stakeholders, and local administration. The QI team collates and triangulates administrative data from health center and health post to organize and inform the plan and study forums of the QI cycles.

Methods: Using before-and-after cross-sectional surveys of women with children 0 to 11 months in March 2016 and November 2017 from a sample of 98 and 296 communities (kebeles) representing intervention and comparison area was used to evaluate the effects of the PC-Solutions strategy on household MNH care indicators. The sample size of respondents at baseline and follow-up were 2,268 (473 intervention and 1,795 comparison) and 2,244 (468 intervention and 1,776 comparison). Difference-in-Difference (DiD) analysis was used to estimate treatment effects. The analysis matched intervention kebeles with comparison kebeles based on baseline estimates of the MNH indicators and the socio-economic and demographic characteristics of the respondents using propensity score matching technique.

Results: The statistically significant (p<.05) DiDs, i.e., the intervention effects in percentage-points were: 4.2 for first antenatal care (ANC), 9.9 for ANC in first and last trimester, 5.1 for postnatal care (PNC) within 48 hours of delivery, and 3.8 for immediate initiation of breastfeeding. The DiDs were not statistically significant (p>0.05) for complete ANC, four and more ANC visits, skilled delivery, exclusive breastfeeding, clean cord care, and thermal care for the newborns.

Conclusions: This participatory community quality improvement strategy was effective in improving utilization and quality of MNH practices including early ANC booking, use of ANC, PNC, and early initiation of breastfeeding. As such, participatory community strategies should be considered to foster community-responsive health system.
Building community-led interventions for demand creation for skilled pregnancy care in rural Nigeria

In 2015, the World Health Organization (WHO) estimated that about 58,000 maternal deaths occur in Nigeria annually, accounting for 19% of global maternal deaths. The majority of these deaths occur in rural communities and are linked to extreme poverty and its attendant indicators: lack of access to health services, weak infrastructure, and adverse socio-cultural factors. Despite the fact that policymakers recognize that primary health centres (PHCs) should play a key role in improving rural women's access to skilled pregnancy care, PHCs are often poorly utilized. The aim of this paper is to present a community-driven approach that is being implemented by Women’s Health and Action Research Centre (WHARC) to create demand for skilled maternal and child health care services in two rural Local Government Areas (LGAs) in South-South Nigeria. A formative study was conducted in the two LGAs to identify the demand and supply factors for low utilization of PHCs in order to design interventions to increase women's access to skilled pregnancy care. Data were collected through a mixed-method approach that involved community conversations, focus group discussions, key informant interviews, household survey and exit interviews. The results of the formative research were presented and discussed with traditional rulers, council of chiefs, ward development committee (WDC) members, women leaders and heads of PHCs in the LGAs. A consensus was reached on community-led strategies for intervention. The interventions include: 1) Memorandum of understanding with transport business owners for transportation of women to PHCs, 2) Use of rapid SMS to link pregnant women to health providers and transport owners, 3) Local community fund-raising and contributory insurance called “Igho Omoh” and “Ikpagie Omo” for funding of maternal and newborn health care, 4) Sensitization visits led by wife of traditional ruler with the WDC to communities, and 5) Escort of pregnant women in labour by community vigilante group at night. These are being implemented alongside collaboration with policymakers to improve PHC facilities, including increased staffing and the re-training of staff. These approaches recognize the wisdom of community women and elders, and enlist their full participation to increase project support and effectiveness, strengthening its impact and sustainability over time. By working with communities to create workable and sustainable theories of change, the project will address cultural factors, gender issues, maternal and community risk factors, and can reduce the remaining bottlenecks that hinder women's access to skilled pregnancy care in rural areas.
Integrating Qualitative Evidence into Global Guidelines for Maternal and Child Health Programs: An Ethnographic Case Study of the Development of WHO’s OptimizeMNH Guidelines

Co-authors: Christopher James Colvin - University of Cape Town

In an era of ‘evidence-based policy-making’, it is now routine to produce and systematically review quantitative evidence on safety, efficacy and cost-effectiveness when making global health policy decisions. There is growing recognition, though, that the ultimate success of health interventions often hinges on complex processes of implementation, the impact of sociopolitical and cultural contexts, resource constraints and opportunity costs, and issues of equity and accountability. Many see ‘qualitative research’ as a critical evidence base for understanding these issues. ‘Qualitative evidence syntheses’ (or QES)—modeled loosely on quantitative systematic reviews—have recently gained momentum as an important vehicle for integrating qualitative evidence into global health policymaking.

However, integrating QES in ways that are both acceptable to the sometimes conservative world of health policymaking and consonant with social science’s distinctive methodologies and paradigms is a real challenge. Applying QES well requires both a renegotiation of these methods and a broader reformulation of knowledge translation’s core objectives and assumptions. This chapter offers an (auto)-ethnographic case study of one such effort to renegotiate and reformulate some core evidence- and policy-making practices through the use of QES. The case study examines the development of the WHO’s 2013 OptimizeMNH guidelines for task shifting in maternal and newborn health programs. These guidelines, commissioned by WHO’s Department of Reproductive Health, were the first WHO guidelines to officially incorporate qualitative evidence. I was part of the guideline review team and conducted several QES reviews for the project.

In addition to my role on the review team, though, I have also been conducting a parallel ethnographic study that reflects on these opportunities for integrating new forms of knowledge into global health policy. The study considers how cases like this might deepen our understanding of how global health policymaking and evidence-making intersect. This chapter also considers how these developments were, in part, made possible by a variety of political, social, institutional, and epistemological commitments specific to those working in maternal and child health (MCH). It isn’t an accident that the first use of qualitative evidence in official WHO guidelines emerged in its Department of Reproductive Health. The same forces that led to innovation in this setting, however, may also be the same forces that ensure a less than equal status for this kind of evidence going forward.
Evidence of positive effects of a demand creation strategy on household and community social norms related to maternal and newborn health: the Ethiopia experience

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Background: Ethiopia’s neonatal mortality rate (28 deaths per 1,000 live births) is considerably higher than the global average (19 per 1,000). In 2013, the government introduced the Community-Based Newborn Care program to bring critical prevention and care interventions closer to communities in need. In recognition that creation of demand for services is a function of the health system, a strategy for maternal, newborn and child health/community-based newborn care (MNCH-CBNC) was developed. The demand creation strategy aims to create an enabling environment to support appropriate MNCH behaviors and practices. We evaluated the extent to which the strategy contributed to changes in social norms at the household and community levels.

Methods: Using an embedded multiple case study design, we purposively selected one district in each of two zones. We then selected two kebeles (or wards) from each district with varying levels of demand creation implementation support—one with low and one with high implementation strength. Fourteen criteria were used to determine implementation strength, including engagement of key stakeholders in demand creation, organizational strength of kebele command posts, and community collective action. We collected qualitative data from key stakeholders in each of the four kebeles—including government health workers, community health workers, mothers, fathers, and mothers-in-law—using in-depth interviews, focus group discussions, and illness narratives. All interviews were transcribed, translated into English, and coded using NVivo 10.0. We compared case reports from all four kebeles in a final cross-case analytic report.

Results: Overall, we found that the demand creation strategy contributed to improvements in social and community norms around MNCH. Specific results included changing attitudes related to harmful traditional practices; increasing male involvement in decision-making including support for MNCH care practices and care-seeking; enabling women to disclose their pregnancies earlier to families; increasing awareness about the importance of antenatal care, institutional delivery, and care-seeking for sick newborns; and shifting attitudes about breastfeeding and appropriate care of the umbilical cord.

Discussion: Findings suggest that a demand creation approach that applies community empowering strategies to engage communities can improve access to and use of MNCH services and better uptake of newborn-related practices in the home by influencing social norms and attitudes. Demand creation is an important component of a health system, and community-led, participatory approaches have the potential to contribute to positive changes in health systems strengthening, health outcomes, and the accountability of systems to the populations they serve.
Improving post-cesarean follow-up in the community: Developing and validating a screening protocol to support community health worker diagnosis of surgical site infections in rural Rwanda

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Background: In rural Africa, over half of surgeries are cesarean sections. Women receive little oversight after discharge, and about 10-15% of women develop a surgical site infection (SSI). Delays or failure to seek care for an SSI can lead to considerable morbidity or death. We developed and validated a screening algorithm to assist community health workers (CHWs) in identifying SSIs and referring women to care.

Methods: All women, 18+ years old, who underwent cesarean delivery at Kirehe District Hospital (rural eastern Rwanda) between April and October 2017 were eligible for the study. During discharge, women were asked to return to the hospital on post-operative day (POD) 10 (+/- 3) and provided a voucher to cover transportation costs. At the return visit, a CHW administered a nine-item clinical questionnaire, assessing for: 1) increasing pain since discharge, 2) fever since discharge, 3) erythema, 4) edema, 5) induration, 6) dehiscence, 7) discolored drainage, 8) drainage with foul odor, and 9) thick drainage. Independently, a general practitioner (GP) administered the same questionnaire and assessed SSI presence. GP’s SSI diagnosis was used as the gold standard. We split the data into two independent sets – a development (April-July) and a validation (August-October) dataset. Using a simplified CART analysis, we identified a subset of screening questions with maximum sensitivity for the GP and CHW. We evaluated the subset’s sensitivity and specificity in the validation dataset.

Results: Of the 596 women enrolled, 525 (88.1%) returned for the follow-up visit – 294 (56.0%) in the development and 231 (44.0%) in the validation dataset. Two combinations of the GP-administered questions maximized sensitivity: fever/pain/discolored drainage (sensitivity=96.8%, specificity=85.6%) and fever/gaping wound/discolored drainage (sensitivity=96.8%, specificity=86.7%). For the CHW-administered questions, fever/pain/discolored drainage maximized sensitivity (sensitivity=87.1%, specificity=73.8%), and was the subset of screening questions recommended. In the validation dataset, this subset had sensitivity=95.2% and specificity=83.3% for the GP-administered questions and sensitivity=76.2% and specificity=81.4% for the CHW-administered questions.

Discussion/conclusions: We believe that the combination of questions – fever/pain/discolored drainage – has sufficient sensitivity and specificity and is simple enough for CHWs to use for a community-based screening for SSIs post-cesarean delivery. The CHW-administered questions had lower sensitivity, indicating the need for increased clinical training to improve accuracy of responses. This protocol is now being used in a randomized-control trial to evaluate the impact of various CHW-mHealth interventions to support identification and referral of post-cesarean patients with SSIs.
Establishing Community Level Synergies to Improve Women’s Access to Maternal Newborn Health Services in Gombe State, North East Nigeria

Co-authors: Bala Bello Abubakar - Pact West Africa SAQIP Project

Background

The challenges facing communities on maternal and child health in Nigeria and Gombe state in particular are complex and require effective collaboration and partnerships. Receiving care from a skilled provider has been identified as the single most important intervention in safe motherhood. The State Accountability and Quality Improvement Project (SAQIP) is a project funded by the Bill and Melinda Gates Foundation in Gombe state. The SAQIP project through Civil Society Organizations was designed to support increased utilization of public Maternal, Newborn and Child Health (MNCH) services in PHC’s through the formation of mothers groups which consists of women of child bearing age using the WORTH model.

Approach

325 mothers’ groups (MGs) with 8125 members were established to increase access to MNCH services—a literacy-led approach to economic empowerment through savings, loans and income generating activities and MNCH sessions to increase their factual knowledge of danger signs associated with pregnancy, and motivation of members to seek and pay for MNCH services. SAQIP strengthens community structures such as Ward Development Committees (WDCs) to provide the oversight needed to ensure delivery of quality health services at PHCs, take ownership, create demand, and conduct resource mobilization and address gaps identified both at the facility and community level. The project also supported the formation of men as allies to support the women in the community and reduce gender issues and engage traditional leaders to promote acceptability and ownership. WORTH offers no seed money, as such is a sustainable model that has replicated new groups in the various communities.

SAQIP collaborates with Society for Family Health through the village health worker (VHW) scheme in the same communities. The scheme follows up pregnant women to their houses, counsel them and encourage physical referrals to health facilities. This has led to good synergy in increasing access to MNCH services.

Results

68% members of mothers’ groups have benefited from the group’s savings to start up or expand a small business, 83% of members of mothers’ groups have knowledge of at least two danger signs relating to pregnancy, labor and delivery, and the postnatal period. Women’s participation in decision-making due to improved earnings increased by 31% and hospital delivery among members increased by 14%. As a mark of acceptability by the community, 115 groups were formed in the first phase and later scaled up to 325 groups.
Shongkour Roy, Population Council
Poster Number: 262

**Strengthening health systems for identification and management of preeclampsia and eclampsia in Bangladesh: Findings from monitoring data**

Co-authors: Shongkour Roy - Population Council; Kanij Sultana - Population Council; Pooja Sripad - Population Council; Amy Dempsey - Population Council; Charlotte Warren - Population Council; Sharif Mohammed Ismail Hossain - Population Council

**Background**

Early prevention, detection, and management of preeclampsia and eclampsia (PE/E) – hypertensive disorders contributing to maternal morbidity and mortality – is often limited due to lack of skilled health professionals in primary and referral healthcare facilities in low and middle-income countries. This implementation research study assesses the ability of primary healthcare providers to provide quality of maternal healthcare services for prevention, identification, and management of PE/E in Bangladesh.

**Methods**

Pre-intervention and follow up monitoring data (October - December 2016 and January - December 2017, respectively) were collected from 136 selected facilities including 116 primary and 20 referral facilities in four districts of Bangladesh. The project provided intensive training to 399 primary healthcare providers including nurses, family welfare visitors, and sub-assistant community providers on prevention, identification, and management of PE/E as well as ensured the supply of commodities such as blood pressure machine, urine dipstick, injection Magnesium sulphate (MgSO4) loading dose and pictorial algorithms for administration. Follow-up and pre-intervention data were compared by descriptive statistics and inferences made through the Wilcoxon Rank-Sum test.

**Results**

Increases were observed in antenatal care visits by 16%, blood pressure measurement by 27%, and urine proteinuria checked by 88%. Hypertension during pregnancy and preeclampsia correctly identified by skilled primary healthcare providers increased by 58% and 39%, respectively. Providers’ ability to identify antepartum and postpartum severe preeclampsia and eclampsia also increased by 11% and 10%. Administration of the MgSO4 loading dose (injection) for severe preeclampsia and eclampsia patients increased by 82%. Comparison of follow-up to pre-intervention data showed that the increase in MgSO4 use was significant at P<0.0001.

**Conclusions**

Primary healthcare providers are more likely to identify and manage PE/E when they receive focused training, mentorship and commodities are available in health facilities. The program has the potential to strengthen community health systems by improving primary healthcare provider’s capacity to provide responsive services in primary and referral health facilities in high-need contexts like Bangladesh.
Exploring the effects of interviewer gender on mothers’ responses to household surveys in Bihar, India

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Background

In 2016, two separate household surveys were conducted in Bihar, India during the same time period using identical questionnaires and similar survey methods. Results revealed significant differences between the surveys in 37% of indicators at the 0.05 level. One survey used all-male interviewers while the other had a team of female interviewers. Respondents to both surveys were mothers of children aged 0-59 months.

This study explores the perceived acceptability of male and female interviewers for household surveys among mothers of children <5 years in Bihar. We explore potential effects of interview gender on responses from mothers to topics showing differences in the 2016 surveys (nutrition, antenatal care and birth preparedness, immunisation, support from frontline workers (FLW) and family planning). The study took place during December 2017-February 2018.

Methods

Qualitative methods were used including 22 in-depth interviews and 10 focus group discussions in the rural Aurangabad and Gopalganj districts of Bihar, the same area where the 2016 surveys took place. Focus group participants were purposefully selected mothers of children aged 0-59 months and significant family members including husbands and mothers-in-law. Mothers represented different castes, age and parity. In-depth interviews were carried out with FLWs, community leaders, and male and female interviewers from the 2016 surveys.

Results

Preliminary finding suggest mothers in Bihar are more open to discussing the health status and needs of their children rather than their own health, regardless of the interviewer's gender. Mothers are hesitant to talk to an interviewer of either gender if a familiar member of the community is not present and they are more willing to discuss their own health provided the interviewer is female. Mothers are particularly hesitant to discuss female-specific issues such as breastfeeding, menstruation, family planning, and STIs with male interviewers. In contrast, mothers are more willing to discuss their children’s health with an interviewer of either gender. They felt at ease in sharing information with others about their children’s health. Family members and FLW tend to acknowledge and approve of these differences. Full results will be available for the presentation.

Conclusions

Depending on interviewer gender, household surveys in Bihar could misrepresent coverage of health services for women and skew their health care needs which in turn could affect critical programming decisions that target women’s health. Findings should be used to provide guidance on interviewer selection and training for future household surveys covering maternal and child health in Bihar.
The operations of the free maternal health policy and out of pocket payments during childbirth in rural Northern Ghana

Co-authors: Philip Ayizem Dalinjong-University of Technology Sydney; Alex Y Wang-University of Technology Sydney; Caroline SE Homer-University of Technology Sydney

Background

To promote skilled attendance at births and reduce maternal deaths, the government of Ghana introduced the maternal health policy under the National Health Insurance Scheme (NHIS) in 2008. The objective is to eliminate financial barriers associated with the use of services. But studies elsewhere showed that out of pocket (OOP) payments still exist in the midst of fee exemptions. The aim of this study was to estimate OOP payments and the financial impact on women during childbirth in one rural and poor area of Northern Ghana; the Kassena-Nankana municipality. Costs were taken from the perspective of women.

Methods

Quantitative and qualitative data collection techniques were used in a convergent parallel mixed methods study. Structured questionnaire (n=353) and focus group discussions (FGDs =7) collected data from women who gave birth in health facilities. Quantitative data from the questionnaire were analysed, using descriptive statistics. Qualitative data from the FGDs were recorded, transcribed and analysed to determine common themes.

Results

The overall mean OOP payments during childbirth was GH¢33.50 (US$17), constituting 5.6% of the average monthly household income. Over one-third (36%, n=145) of women incurred OOP payments which exceeded 10% of average monthly household income (potentially catastrophic). Sixty-nine percent (n=245) of the women perceived that the NHIS did not cover all expenses incurred during childbirth. The women made OOP payments for drugs and other supplies. Disinfectants, soaps, rubber pads and clothing for newborns were also purchased. Seventy-five percent (n=264) of the women used savings, but 19% had to sell assets to finance the payments.

Conclusion

The NHIS policy has not eliminated financial barriers associated with childbirth which impacts the welfare of some women. Women continued to make OOP payments, largely as a result of a delay in reimbursement by the NHIS. There is need to re-examine the reimbursement system in order to prevent shortage of funding to health facilities to enable the realisation of universal health coverage.
Asrat Tolossa, World Vision Canada
Poster Number: 265

Improvement of health service delivery through integrated health systems support approach in Bangladesh, Kenya, Myanmar, Pakistan and Tanzania.

Co-authors: Asrat Dibaba Tolossa-World Vision Canada; Abena Thomas -World Vision Canada

Background

ENRICH is a 5-years (2016-2020), 47 million Canadian dollars Maternal Newborn and Child Health and Nutrition program funded by Government of Canada and implemented in Bangladesh, Kenya, Myanmar, Pakistan and Tanzania. ENRICH uses nutrition and health systems strengthening pathways to reduce under five mortalities by improving basic nutrition and nutrition sensitive services and addressing nutrition-related causes such as: poor breastfeeding, stunting, wasting, and vitamin A and zinc deficiencies. Children under 2 years are specifically targeted because nutrition in the first 1000 days of life is now recognized as an important determinant for stunting, neonatal and infant mortality.

Health system strengthening support includes strengthening district health management teams’ capacity in planning and budgeting, improving the capacity of frontline health workers to manage infectious diseases and malnutrition, and distribution of medical equipment and supplies to targeted health facilities specially in hard to reach areas.

Annual Outcome Monitoring

Methodology

The program conducted annual outcome monitoring exercise in the 5 countries using Lot Quality Assurance Sampling (LQAS) methodology to gauge progress after one-year implementation, and improve effectiveness and efficacy by strengthening the use of evidence for programming decisions. Two parallel surveys were conducted in each country among children 0–6 and 6–24 months. The two age groups were selected as most of the Performance Measurement Framework (PMF) indicators can be best measured among these two age groups.

Results

All countries except Tanzania met their annual target for ANC and skilled birth attendance. Similar progress was observed for early initiation in 3 of the 5 countries. All countries exceeded their first-year target for PNC. The highest increase was observed in Myanmar for 3 indicators (ANC, SBA, and PNC). Tanzania failed to meet target by a small margin (<3%) for two indicators and Myanmar and Kenya each for one indicator. The improvement of coverage of these services is attributed to refresher training provided to frontline health workers, medical equipment and supplies distributed, supportive monitoring supervisions and technical support on data recording and reporting by district health medical teams. Improved functionality of existing community health workers also contributed to the improvement on demand and uptake of the services. Village health committees also played key role in identifying and referring pregnant mothers to health facilities for ANC and delivery.

Conclusion

Integrated health systems support and annual outcome monitoring will result in an improved service delivery, a more informed program-level decision making, and a greater sense of direction for program implementers.
Muluneh Mossie, University of South Africa (UNISA)
Poster Number: 266

**Leaving No One Behind: Barriers to Attend Antenatal Care within the First Four Months of Pregnancy among Women from Poorest Households in Addis Ababa**

Co-authors: Muluneh Yigzaw Mossie-University of South Africa (UNISA); Peter Thomas Sandy-University of South Africa (UNISA)

Background: Since the 1990s, the world has seen a substantial increase of antenatal care (ANC) coverage. However, many women are often not booked for ANC within the first four months of pregnancy, the recommended period to have the first ANC contact. The aim of this study was to identify health system barriers to attend ANC within the first four months of pregnancy among women from poorest households in Addis Ababa.

Methods: An explanatory sequential mixed methods study was conducted in Addis Ababa in July 2017. The quantitative phase enrolled 739 women who gave birth one year preceding the study. All women were asked where and at what stage of pregnancy they were booked for ANC follow-up. Following analysis of data from the quantitative phase, a portion of women were invited to participate in the qualitative phase of the study. In-depth interviews were conducted to identify all perceived health system barriers for early ANC enrolment.

Results: Less than 45.0% of women from poorest households received ANC within the first four months of pregnancy while 71.4% of women from richest households received ANC in the same period. Three factors were noted as the most important barriers to attend ANC within the first four months of pregnancy: opportunity costs, lack of knowledge whether they are pregnant, and not aware of whether attending ANC at this stage of pregnancy is important. Almost all participants from poorest households noted that too frequent hospital appointments during pregnancy could affect their income generating capacity while none of the participants from the richest households were stated the same. Women working for the informal sector (e.g. construction sector) said the period at the early stage of pregnancy was the crucial time to acquire more money for their family, and hence no need to skip working hours for ANC unless their health is in jeopardy. Most women from poor households noted that they would start ANC during the first four months of pregnancy if the health care system delivers ANC services off-working hours. All women stated that they have never ever consulted by the health care system during planning and service delivery to identify the convenient time to attend ANC.

Conclusion: The health care system needs to re-organize itself and deliver services during convenient hours so that all pregnant women especially those working in the informal sector will start ANC follow-up at the early stage of their pregnancy.
Background

Continuum of maternal health care services is one of the quintessential features of Sustainable Development Goals. Any country striving to achieve universal health care should ensure complete usage of maternal and child health services. The continuum of maternal and child health care services have started gaining importance in the recent years, however, there is still a lacuna pertaining to such research in India. This framework ensures that every pregnant woman should utilize the entire package of maternal health care services, swaying from antenatal care services to postnatal care services.

Objectives

Against this backdrop, this paper hinges on to explore the impact of governmental policies on the continuum of maternal health care services. A comparative analysis across time (pre and post-reform period) and place (High Focussed Group states vs. Non-High Focussed Group states) have been undertaken. Inter-regional analysis ascertained why similar governmental efforts exhibited different responses under different geographical contexts.

Methods

The analysis was conducted using National Family Health Survey 2005-06 and 2015-16 (DHS version of India). The stratified random sampling design was used, it encompassed a sample of 36447 women in 2005-06 and 185473 women in 2015-16 respectively.

Results & Discussions

Estimates were made to elucidate the probability of utilizing complete maternal health care services by employing generalized ordinal logit model, where the dependent variable is taken as a categorical i.e. Full use of maternal health interventions, partial use of maternal health interventions and no use of maternal health interventions. The results from univariate analysis revealed that the percentage of pregnant women using full care escalated from 22.3% to 35.03% between 2005-06 and 2015-16, the percentage of women availing partial care has improved from 35.3% to 53.98% and the percentage of women who have not availed any care recuperated from 42.28% to 11.99%. The results from the generalized ordinal logit model ascertained that, when compared to no care, people enrolled under JSY scheme are more likely to increase the usage of full care by 37% and partial care by 60%. Among those who sought advice from ASHA workers are more likely to reduce their usage of full care and partial care by 61.1% and 77.1% respectively.

Policy Implications

The vital services in the continuum of care for MNCH is imperative towards reducing inequity in health and designing and implementing better strategies. This would improvise the general public health perspective.
Rwanda as a model of maternal health: A comparative analysis with countries from SSA that did not achieve the MDG5A

Co-authors: Maria Jose Gonzalez-Dalian Medical University; Ran Ren-Dalian Medical University

Background: Reducing the maternal mortality ratio (MMR) has been a primary target of global health during the last years, and it is an essential objective of the current Sustainable Development Goals (SDGs). Currently, only 1% of the maternal deaths occur in developed areas, whereas 99% of them occur in developing countries. A 66% of maternal deaths occur in Sub-Saharan Africa (SSA). In SSA, Rwanda was one of the few countries that achieved the MDG5, and for that reason it can serve as a model of maternal health improvement to other SSA countries. This study aims at analyzing the differences among Rwanda and countries that did not achieve the MDG5 by the end of 2015.

Methods: This research utilized the latest data from WHO, World Bank, and UNDP open sites. Eighteen countries from SSA that did not achieve the MDG5A were analyzed in this study. Only countries with an MMR baseline higher than 1000 deaths/100 000 live births in 1990 were analyzed. Rwanda was used as a reference in this comparison. Ten indicators were divided into three main categories: Social (adolescent fertility rate, improved sanitation facilities, population living in urban areas, and female literacy rate), economic (health expenditure per capita, public health expenditure, and GDP per capita), and healthcare-related factors (number of nurses and midwives, contraceptive prevalence, and skilled attendance at birth). Descriptive statistics were used to compare among the countries and to compare with the reference.

Results: Indicators as contraceptive prevalence, improved sanitation facilities, and female literacy rate tended to be considerable higher in Rwanda than in most of the countries that did not achieve the MDG5A. While the adolescent fertility rate was considerable lower in Rwanda. The GDP per capita of Rwanda (current US$697) was similar and even lower than some of the countries that did not achieve the MDG5A.

Conclusion: The particular case of Rwanda, country that achieved the MDG5A showed that it is possible to improve maternal health despite limited economic resources. Declines in maternal mortality in Rwanda are associated with improvements in the percentage of contraceptive prevalence, female literacy rate, and skilled births attendance. However, the improvements were not made only in the health sector, but also Rwanda prioritized areas as education, nutrition, and sanitation. Rwanda’s successful experience in reducing the MMR might be a good model for other African countries in the process of achieving the SDGs goals.

Keywords: Maternal Health, MDG5, SDGs, Rwanda
Gains in maternal health in the Philippines: Insights from national health surveys and maternal health policies

Co-authors: Maria Stephanie Fay Samadan Cagayan-University of the Philippines - Philippine General Hospital; Juan Antonio De Jesus Ricarte-University of the Philippines Manila Universal Healthcare Study Group; Rita Mae Cabillon Ang-Bon-Department of Health Region V Philippines; Erlidia Llamas Clark-University of the Philippines-Philippine General Hospital

Background: The Sustainable Development Goal 3 (SDG) took effect after many of the world’s developing countries failed to meet the previously set Millennium Development Goals (MDG). Despite advances in crucial maternal health metrics such as facility-based obstetric care and skilled birth attendance, the maternal mortality ratio in the Philippines is still increasing. This study aims to document the progress in maternal health in the Philippines and analyze the patterns in maternal mortality reduction in relation to various maternal health metrics and contextual factors.

Methods: Data from 36,664 livebirths were analyzed from the five published Philippine Demographic and Health Surveys. Direct estimation was used to project the different maternal health metrics within the 20-year period. Data from the Field Health Services Information System (FHSIS) was also used to plot the maternal mortality ratio (MMR) in the Philippines throughout the years. Rate differences and ratios were measured to estimate relationship between these data sets. Correlation with other contextual factors such as government budget, maternal health policies and reports were also done.

Results: Estimates of maternal mortality ratio did not show sharp reduction in the 20-year period. In 1993, the point estimate of MMR was 92.1 deaths per 100,000 livebirths. This then increased by 17%, to reach a point estimate of 107.7 deaths per 100,000 livebirths in 2003. By 2013, the point estimate dropped to 86.4 deaths per 100,000 livebirths, which is a 20% decrease in MMR. Maternal metrics such as delivery at a health facility, and skilled birth attendance rate both improved through the 20-year period (117% and 38% respectively). Relative inequalities in maternal health indicators between urban and rural settings have also shown considerable improvement. Between 1993 and 2013, notable milestones in maternal health included the adoption of MDGs, development of operations guidelines for maternal health, increased public expenditure on health, and the passing of the reproductive health law.

Discussion: Findings indicate that despite the improvements in facility-based delivery and coverage of skilled attendants over the 20-year period, there was no direct progress reflected in the maternal mortality ratio. Other factors, such as program and policy milestones in maternal mortality, seem to affect the trends in these maternal outcomes. For the Philippines to meet SDG3, these programs should be designed to incorporate lessons from these socioeconomic and contextual factors.
Background

Obstetric violence can lead to dehumanised health care, health complications, psychological distress, trauma or death due to neglect. Observational evidences on obstetric violence were shared with the stakeholders to design an intervention for reducing violence and promoting equity in health facilities.

Methods

Three primary and three secondary public hospitals that provide maternity care in northern India were selected purposively. A generic exploratory qualitative research design, data was collected through quasi-participant observation of 11 childbirths and 3 in-depth interviews with post-natal women. Three focus group discussions (FGDs) with one each among low, medium and higher income group were held to understand comparative perspective of community on obstetric violence. Data were analyzed using techniques derived from framework analysis using NVivo-10.

The observational findings were shared with heads of department of obstetrics and gynaecology of government medical colleges, staff of government nursing college, maternal health programme officers, government doctors, academicians, civil society, officials of Ministry of Health and Family Welfare, Government of India and State health departments.

Results

Theories of violence helped us in putting obstetric violence in context of omission, repression and alienation within the institutional and interpersonal framework. The child birth observations in the labour room provided evidence for alienation- instances of neglect, abandonment, denial of care and discrimination were observed. Physical violence was used as a tool of repression to control and dominate women in pain in the labour room. Women reported discrimination based on gravida, level of education and ethnicity, were not allowed to express needs or participate in decision making. Judgmental comments and blaming was commonly observed. There were omissions of informed consent, birth companion in the second/third stage of labour, information about care provided/ physical examination. Pregnant women were exposed to other women lying in the labour ward and non-health male allied staff’s. The observational findings were validated by the FGD participants.

Situating ourselves within the health system, we are implementing participatory intervention for bringing change in organisational culture of two health facilities in north India. Building skills on self-reflection and clinical empathy at health facility will be supplemented with continuous policy dialogue with government and civil society.

Conclusion

There is a need to focus efforts on challenging normalisation of obstetric violence and “humanising” childbirth experiences which are innovative and sustainable.
Effect of Delayed Cord clamping on neurodevelopment at 12 months-a randomized clinical trial

Co-authors: Nisha Rana-Uppsala University

Background and objective: Delayed umbilical cord clamping (DCC) is associated with improved iron status up to 8 months and a reduction of anemia until 12 months of age and also associated with improved social and fine motor function at 4 years. Assessment of development after DCC has not been performed earlier in a setting with high prevalence of iron deficiency. We sought to investigate the effects of DCC, compared to early/intermediate cord clamping on development evaluated with Ages and Stages Questionnaire (ASQ) at 12 months of age.

Method: A randomized controlled trial investigating effect of DCC (≥180 sec) versus early/intermediate cord clamping (≤60 sec) in 540 full-term normal deliveries. After 12 months, parents were asked to report their infant’s development by ASQ. Infants having a score less than one standard deviation under mean score were considered as ‘at risk’ of affected neurodevelopment.

Results: At 12 months of age, 332 (61.5%) infants were assessed. Less children in the DCC group were ‘at risk’ of having affected neurodevelopment measured by ASQ total score, 21 (7.8%) versus 49 (18.1%) in the early group, relative risk 0.43 (0.26 to 0.71) and had higher mean total score (SD), 290.5 (10.4) vs. 287.2 (10.1), p<0.001. Significantly less infants in the delayed group were ‘at risk’ also in the domains ‘communication’, ‘gross motor’ and ‘personal social’.

Conclusions: DCC after 3 minutes was associated with overall neurodevelopment improvement assessed at 12 months of age as compared to infants in the group with cord clamping within 1 minute.
Neha Singh, London School of Hygiene & Tropical Medicine
Poster Number: 272

Understanding the Tanzanian maternal health care system and its response to payment for performance: an application of causal loop diagrams

Co-authors: Neha S. Singh-London School of Hygiene & Tropical Medicine; Zaid Chalabi-London School of Hygiene & Tropical Medicine; Karl Blanchet-London School of Hygiene & Tropical Medicine; Peter Binyaruka-Ifakara Health Institute, Tanzania; Michelle Remme-London School of Hygiene & Tropical Medicine; Agnes R Semwanga-Information Systems Department, College of Computing and Information Sciences, Makerere University, Uganda; Josephine Borghi-London School of Hygiene & Tropical Medicine

Background: Understanding the impact of health system strengthening initiatives on health systems is critical to optimising their design and eventual impact. System dynamic models (SDMs) is one method that accounts for the complexity of healthcare systems by understanding these systems and their response to health care programmes. SDM represents a top-down approach where the interest is in modelling the complex macro behaviour of the system. The first step in a SDM is to develop a causal loop diagram (CLD), which maps out the health system’s variables, their interactions, and eventual response to programmes. We developed a CLD of the Tanzanian maternal health system, representing the demand and supply of maternal care, the factors influencing this, and the expected impact of payment for performance (P4P) on the maternal health system. P4P, or incentives to providers to deliver better maternal care, is currently being scaled-up in Tanzania, and the findings of this study will inform its longer-term design. Methods: The CLD was informed by past health systems research in Tanzania, research on the determinants of demand for maternal care in Tanzania based on past research, data from an evaluation of P4P in Tanzania, and CLDs of health systems in similar settings. Results: Results will present the CLD and discuss features of the Tanzanian maternal health care system, and how it is affected by the introduction of P4P. The CLD will identify cause or influencing variables linked to health system functions (e.g. financing, human resources), and effect or influenced variables (e.g. drug availability, clinical practice indicators) with arrows, illustrating the direction of causal relationships between variables. For example, increased financial incentives may increase productivity of health workers and their motivation and performance; cost of care may have a negative effect on patient demand for services; health worker attitude would have a positive effect on demand. The CLD will also illustrate time delays in causal effect between two variables and feedback loops. Discussion: CLDs are a practical means of visualising the health system and capturing its response to strengthening programmes such as P4P, and are a precursor to simulation models. This CLD will be the first step towards building a SDM for Tanzania -- the first time this novel methodology will be applied to understanding this setting's health system, taking into account its complexity. Our results will inform the design of the national P4P programme, in order to optimise health system performance and adaptation.
Group Antenatal Care; A transformational service delivery model to improve quality and service utilization through radical re-organization of care in low and middle income countries

Co-authors: Brenda N. Onguti-Jhpiego, Kenya; Stephanie Suhowatsky-Jhpiego, Nepal; Jonesmus Wambua-Jhpiego, Kenya; Mark Kabue-Jhpiego, US; Lindsay Grenier-Jhpiego, US

In LMICs, providers are unable to deliver quality antenatal care (ANC) under the current service delivery model where, on average, individual ANC visits last 3-4 minutes and minimum health education is provided. The result is poor client experience, low health literacy, sub-optimal pregnancy care, and reduced subsequent ANC use.

Group ANC radically re-organizes care using the same human resources to provide ANC visits of 90-120 minutes using an empowerment based, participatory framework. This study aimed to test the feasibility, effectiveness, and sustainability of G-ANC in LMICs to increase service utilization and quality of care.

A facility based 40-cluster randomized controlled trial was conducted in Kenya and Nigeria comparing G-ANC to standard individual ANC provided by midwives and nurses. Women ≤24 weeks gestational age were enrolled at their first ANC visit (1,085 women in Nigeria; 1,013 in Kenya). In the intervention arm, women were placed in cohorts of 8-15 women and received subsequent ANC together. G-ANC meetings included: self-assessments; brief private consultations; and participatory discussions and activities designed to increase social capital and self-efficacy and to promote behavior change. Women in both arms were surveyed at enrollment and 3-6 weeks postpartum, at which time data was also extracted from facility and patient-held records. Focus groups and in-depth interviews were also conducted with women and providers in the intervention arm. The treatment effect was estimated using generalized estimating equation models to account for clustering.

G-ANC increased service delivery utilization (ANC4+ Nigeria: 39.2% vs. 90.0%, p=<0.001; Kenya: 48.2% vs. 86.3%, p=<0.001); improved multiple metrics of quality of care (e.g. screening for 5 key danger signs [Nigeria: 58.1% vs. 90.0%, p=<0.001; Kenya: 66.9% vs. 87.2%, p=0.022]; comprehensive counseling [Nigeria: 34.1% vs. 85.5%, p=<0.001; Kenya: 21.8% vs. 67%, p=<0.001]; IPTp3+ [Nigeria: 36.0% vs 68.0% p=0.052; Kenya: 41.6% vs. 73.9%, p=0.025]); and would be preferred again for future ANC by those in the intervention arm (Nigeria: 95.5%; Kenya: 95.9%). Programmatic and qualitative data confirmed preference for the model and its feasibility and sustainability. All intervention sites have continued to form cohorts and offer group ANC outside of the study without additional resources. Factors motivating women and providers to continue with group ANC include strengthened relationships; perceived impact on client empowerment and quality of care; and better organization of care.

Group ANC was shown to be a preferred, feasible, and sustainable service delivery model that improved quality and experience of ANC for providers and women.
A comparison of utilization of an innovative maternity waiting home model to standard of care for women awaiting delivery in rural Zambia

Background: Maternity waiting homes (MWHs) can potentially address low facility delivery rates in low-resource settings by helping women living most remotely overcome the challenge of distance. However, there is limited evidence of how well MWHs are utilized. This study compares the utilization rates of 10 newly constructed MWHs at primary health facilities in rural Zambia – designed through community input to be well-constructed, well-managed, and culturally-acceptable – to 10 matched health facilities implementing standard of care for waiting women, through 23 months of follow-up.

Methods: In a cluster-randomized trial, twenty health facilities were matched on distance to a hospital and catchment area size and then randomized. Utilization data were collected monthly from October 2016 (opening of new homes) through December 2017. Data will continue to be collected through August 2018.

Results: Over the first 15 months of operation, the average daily census of women staying at intervention sites (5.51) was significantly higher than control sites (2.34) (p<0.001). The monthly mean numbers of women utilizing intervention MWHs for delivery (12.1) and postnatal stays (2.1) were higher than in the control arm (8.39 and 0.39 respectively; p<0.001 for both comparisons). The majority of postnatal women stayed immediately after delivery. Only a mean of 0.09 and 0.13 women a month utilized the MWH in the intervention and control sites, respectively to access antenatal care. Women utilizing the intervention sites came from a further mean distance (9.26 km) compared to control sites (6.54 km) (p<0.001). A larger proportion of women in the intervention sites (36.4%) compared to control sites (15.8%) came from more than 10 km away (rounded up from 9.5), a statistically significant difference (p<0.001). Intervention site women were coming slightly earlier in their pregnancies (38.8 weeks), based on their expected date of delivery, and staying longer at the MWHs (10.8 days) compared to control site women (39.1 weeks and 5.84 days respectively; p<0.001). The arrival time and average length of stay for intervention site women is within an ideal one to two weeks before delivery.

Discussion/Conclusion: Preliminary findings suggest that new MWHs are better utilized than the standard of care sites during the first 15 months of operation, and are reaching women living farthest from the health facilities. Additionally, MWHs have potential to facilitate compliance with postnatal care guidelines.
Faridullah Atiqzai, Jhpiego
Poster Number: 275

Lessons Learned Using Evidence to Advance Women’s Rights to Quality Maternal Health Care in Afghanistan

Co-authors: Faridullah Atiqzai-Jhpiego; Hannah Tappis-Jhpiego

Purpose:
To share achievements and challenges in using research findings to guide national and sub-national health service quality improvement efforts in a fragile, conflict-affected setting where management of primary healthcare is contracted out to NGOs and tertiary hospital management varies by province and facility type.

Focus/content:
The 2016 Afghanistan Maternal and Newborn Health Quality of Care Assessment, implemented by Jhpiego with support from USAID and UNICEF, was the first large-scale study of the quality of routine maternal and newborn health services in Afghanistan. The focus was on compliance with global clinical standards and the manner and environment in which care is provided.

Through record reviews, interviews and observations of care, we found that simple practices that can substantially reduce the risk of mortality are not routinely provided. These include uterotonic administration immediately after delivery, immediate skin-to-skin contact for newborns, breastfeeding support in the first hour after birth, and regular handwashing by health care providers.

This presentation will share steps taken to obtain permissions for data collection, generate political interest in assessment findings, and encourage use of results to inform policies and programs at national and sub-national levels. Individual and group meetings with donors and Ministry of Public Health departments cast findings as a tool for decision-makers rather than an external performance review; this increased credibility and government ownership of results. Convening a conference to review findings alongside 2015 DHS results helped policy-makers understand how service quality gaps contribute to overall health risks. Finally, dissemination events for national policy makers and multiple rounds of provincial level dissemination and planning meetings with government, NGO, and provincial/regional hospital staff provided forums for developing concrete actions plans to address facility readiness and performance gaps in each province.

Significance:
This experience provides insights into concerted efforts required for effective health research uptake and knowledge translation in Afghanistan’s fragmented health systems. In Afghanistan, research studies are often disseminated in high level meetings with action points that are never taken forward beyond the meeting report. Challenges and lessons learned in creating an enabling environment to reveal gaps in health system performance and encourage data driven action planning can help guide future research in other fragile health systems and research settings.
Shusmita Khan, MEASURE Evaluation  
Poster Number: 276

Dying on the way to health facilities: Is the health system failing the mothers of Bangladesh? A qualitative analysis

Co-authors: Shusmita Hossain Khan-MEASURE Evaluation; Ahmed Ehsanur Rahman-icddr, b; Mizanur Rahman-MEASURE Evaluation; Shams El Arifeen-icddr, b; Kanta Jamili-USAID/Bangladesh

Background: The 2016 Bangladesh Maternal Mortality and Health Care Survey (BMMS2016) found that maternal mortality ratio (MMR) has not progressed with around 196 per 100,000 live births since 2010. The BMMS 2016 also reveals that Bangladeshi women are increasingly seeking maternal care from health facilities, and almost half of women now deliver at facilities. However, the 2014 Bangladesh Health Facility Survey reports very poor level of facility readiness and quality of maternal health services. The BMMS 2016 also found that the percentage maternal deaths “dying in transit” (to hospital) has increased from 12 to 17 points. With this context, this paper qualitatively investigated the maternal deaths in transit and tried to find, if health system caused any preventable maternal deaths.

Methods: Established Verbal Autopsy Questionnaire was used to collect information on causes of death. The VA form had two sections – one open ended with history and another structured section for determination of cause of death. Standard protocol of physician’s review was followed using ICD 10. In addition a committee of obstetricians also guided the review as and when required.

Results: Among the 175 maternal deaths, 33 women died “in transit” (from home to facility or from one facility to another). More than half of the deaths (18 of 33) occurred while shuttling from one facility to another, while rest died on the way to reach the first facility from home. Two third of these women died in preventable causes — 15 postpartum hemorrhage (PPH) cases and 5 eclampsia cases. Among the 15 PPH cases, nine died shuttling from one facility to another, while 3 of 5 with Eclampsia died while shuttling from one facility to another. More than three fourth of the 18 cases who died in transit went to private facilities as their first care-seeking point. As shown in BHFS 2014, private facilities suffer from extremely poor level of service readiness for providing emergency obstetric care, and so are public-sector facilities. This establishes that the almost frail health system was unable to prevent unnecessary deaths.

Conclusions: The qualitative analysis reveals that, due to lack of facility readiness in the private sector, providers could not manage the patients and referred them to higher-level facilities and thus a vast proportion of women died while shuttling from one facility to another. If the facilities were ready to provide services, major preventable deaths due to PPH and eclampsia could have been avoided.
Cultural barriers to health facility delivery in Indonesia and Ethiopia: A qualitative inter-country study

Co-authors: Sudirman Nasir-Hasanuddin University - Reachout Indonesia; Aschenaki Zerihun-Reachout Consortium, Ethiopia; Maryse Kok-Royal Tropical Institute, the Netherlands; Ralalicia Limato-Eijkman Institute of Molecular Biology, Indonesia; Maryse Tumbelaka- Eijkman Institute of Molecular Biology, Indonesia; Daniel Datiko- Reachout Consortium, Ethiopia; Syafriuddin Syafriuddin- Eijkman Institute of Molecular Biology, Indonesia; Rukhsana Ahmed-Rukhsana Ahmed, Eijkman Institute of Molecular Biology, Indonesia and Liverpool School of Tropical Medicine, UK; Miriam Taegtmeyer- Liverpool School of Tropical Medicine, UK

Background: Cultural barriers to health facility delivery are a common experience worldwide despite wide variations in context. Close to community-provider of health care play an important interface role in bridging communities and health systems and their role in maternal health is particularly key. This study explored the views of close-to-community maternal health providers and other community members on the cultural barriers to health facility delivery in two districts i.e. Southwest Sumba and Cianjur in Indonesia and six districts of Sidama Zone, south Ethiopia.

Methods: Employing an explorative qualitative approach, we conducted 110 semi-structured interviews (SSIs) and 7 focus group discussions (FGDs) in Indonesia and 44 SSIs and 14 FGDs in Ethiopia. Participants in both contexts included mothers, men, traditional birth attendants (TBAs), village heads, local administrators and district health officials as well as health care workers and close-to-community providers of maternal health care.

Results: Despite significant geographical and cultural differences, the main findings were of remarkable similarity in the two countries study areas. Traditional and religious beliefs; the issue of shyness, secrecy and privacy; decision making related to pregnancy and delivery; as well as preference for TBAs still exist Indonesia and Ethiopia. These cultural barriers interplay with geographical, transportation and financial factors that hinder pregnant women to give birth at health facility. The presence of TBAs in close proximity at the time of childbirth and their adherence to traditional practices were important factors influencing preference for TBAs care during pregnancy and delivery in all three study areas.

Discussion/Conclusions: Intensifying health promotion about the benefits of giving birth at health facility, increasing partnership among community health workers such as midwives-TBAs collaboration and enhancing responsiveness to traditional practices have potentials to overcome cultural barriers to institutional delivery in the study sites in both countries.
The forgotten mothers: Provision of postpartum care to women delivering in health facilities in sub-Saharan Africa - analysis of Demographic and Health Surveys

Co-authors: Lenka Benova-London School of Hygiene and Tropical Medicine; Onikepe Owolabi-Guttmacher Institute; Emma Radovich-London School of Hygiene and Tropical Medicine; Kerry Wong-London School of Hygiene and Tropical Medicine; David Macleod-London School of Hygiene and Tropical Medicine; Emily Wilson-London School of Hygiene and Tropical Medicine; Oona MR Campbell-London School of Hygiene and Tropical Medicine

Background

Postnatal care is intended to assess the wellbeing mother and newborn during the first weeks of life, with pre-discharge checks occurring before they leave the facility for home. The literature focuses predominantly on utilisation and quality of postpartum care among women who delivered outside of health facilities and on the newborn. The objective of this study is to examine the recent levels and determinants of receiving a postpartum health check by a health professional before discharge from a health facility following childbirth among women in sub-Saharan Africa (SSA).

Methods

We used the most recent DHS dataset in December 2016 for each country in SSA with DHS survey since 2000 and information on the outcome of interest. All women aged 15-49 with a live birth in a health facility in the survey recall period were included in the analysis. The primary outcome was defined as being checked after delivery by a health professional before discharge from a health facility following childbirth. We present the percentages of women receiving a pre-discharge check for each country and for the SSA region. We used univariate and multivariate logistic regression of the pooled data to analyse the determinants of receiving a pre-discharge check by a health professional.

Results

Analysis of 137,218 women from 33 countries showed that the median percentage of women who reported receiving a pre-discharge check was 71.7% across countries, ranging from 26.6% in Swaziland to 94.4% in Burkina Faso. The adjusted regression model showed that factors related to obstetric/neonatal risk factors, women’s socio-economic status, child’s characteristics and the care provision environment were significant determinants of receiving a pre-discharge check. Women delivering in non-public and lower-level public facilities (compared to those delivering in public hospitals), those attended by a nurse/midwife or a non-SBA (compared to doctor/non-physician clinician), and women with &lt;4 antenatal care visits during pregnancy (compared to 4+ visits) had lower adjusted odds of receiving a pre-discharge check.

Discussion

Receipt of pre-discharge check by a health professional following facility delivery ranged widely across countries and was far from universal. Our results suggest the assumption made by other studies and estimates of postnatal care provision that all women delivering in facilities receive early postpartum care is not borne out by the data. In light of substantial increases in institutional deliveries, greater attention is needed to ensure high quality, equitable care in facilities.
Poster Abstracts

Humaira Maheen, University of Melbourne
Poster Number: 279

Improving the continuum of maternity care services for women in rural Pakistan

Co-authors: Humaira Maheen - University of Melbourne; Elizabeth Hoban - Deakin University; Catherine Bennett-Deakin University

Background: There is a global consensus that continuum of care (CoC) is fundamental to reduce the preventable maternal deaths. An effective CoC can only be achieved through a functional primary health care system which places emphasis on the availability, accessibility and quality of health workforce. In resource-constrained setting, the rural health workers carry significant burden to provide maternity-care services to women who live in remote locations, belong to low socio-economic index, and those who could not obtain skilled maternity-care services due to socio-cultural barriers. The study aims to develop a parsimonious health system model which can optimally utilise the rural health workforce and infrastructure to deliver continuum of care services to disadvantaged women in low-middle-income countries. We used Pakistan as an example because of its sizeable primary health care infrastructure and a substantial number of community and mid-level health workers.

Methods: A mixed-methods study was conducted in five rural villages of the Sindh Province, Pakistan. We used a cross-sectional survey with 667 women and in-depth interviews with 15 women to explore women’s maternity care practices for preconception, antenatal, birthing and postnatal care. In addition, we conducted interviews with 20 health workers who provided MCH services at different stages of pregnancy.

Results: There was no coordination between health workers which translated into fragmented delivery of maternity-care services. Only 3% women received CoC services from antenatal to postpartum family planning services. The skilled birth attendant services were used by 54% of women for ANC, 36% for childbirth and 11% for the postnatal care. The community midwives are unable to provide home-based pregnancy and reproductive health services because they do not receive a transportation allowance to deliver those services. The obstetric referral system between community midwives and health facility is at a very basic level and often ends without the follow-up on either side. Contraceptive counselling is not part of routine postpartum-care, thus only a handful women who request reproductive health care are referred to the family planning centre.

Conclusion: To deliver CoC, we recommend that the existing cadres of health workers can work collaboratively and form small health teams, we call ‘Health Workers Group’ (HWG). The HWG would be a skill-mix of an EmONC-trained health worker, a family planning specialist, a community-based skilled birth attendant, and health promoters. Each HWG will serve 1,500 to 2,000 people (aligned with their existing allocated population), implying minimal changes to the original health-care system.
Integrating with immunization for Universal Health Coverage: demand-side evidence from Papua New Guinea on integrated service delivery for post-partum families

Co-authors: Michelle Scoullar-Burnet Institute; William Pomat-Papua New Guinea Institute of Medical Research; Christopher Morgan-Burnet Institute; Peter Siba-Papua New Guinea Institute of Medical Research; Nicholas Larme-East New Britain Provincial Administration, Papua New Guinea; Elizabeth Peach-Burnet Institute; Andrew Vallely-Kirby Institute, University of New South Wales; Beverley Biggs-University of Melbourne; Barbara McPake-Nossal Institute of Global Health, University of Melbourne; James Beeson-Burnet Institute

BACKGROUND
Integrating immunization and other health services could dramatically increase access, especially for the 110 million families that the childhood immunization platform reaches annually. The potential for post-partum family planning (FP) to be provided alongside vaccinations is being intensively studied in a number of sub-Saharan African countries. Papua New Guinea, which has similar health status, has also proposed integrating high priority interventions with immunization. Reviews of these experiences, and other interventions integrated with immunization, show that while many are beneficial they are sometimes not feasible, not always accepted by families, and immunization services do not always benefit. The most common strategic rationales for integrated services relate to greater efficiency and boosting coverage of specific interventions. We contend that planning integrated services should rather start with the demand-side perspective: particularly to understand the nature of co-morbidity, co-existing health needs within families, and families’ preferences that shape the true need and demand for integrated care.

METHODS
Our research is nested within a prospective observational cohort study over 2015-18, tracking 700 pregnant women in rural Papua New Guinea from first antenatal visit until six months after childbirth. We conducted in-depth interviews on feasibility, acceptability and preferences regarding how and what additional services could be added to immunization. We also measured mothers’ and infants’ co-morbidity including clinical data and results of point-of-care tests (POCT) for anaemia and four treatable sexually transmitted infections (STIs). Longitudinal follow-up, assessing the same women at first antenatal, delivery, one month post-partum and six months post-partum, allowed us to track how clinical patterns and preferences evolved. We checked our measures against a short cross-sectional survey of providers and clinics.

FINDINGS
Co-morbidity was common among pregnant women: 86% had clinical or POCT evidence of disease complicating pregnancy; under-nutrition, STIs and other infections. Unmet need for FP was high. Care for mothers was rarely available at immunization visits, the only routine health service contact points available. Mothers had clear preferences for what should be integrated with immunization, not always aligned with national and global recommendations. FP ranked highly, but other services were sometimes preferred. A sub-set (10%) found integration not acceptable. Many women provided recommendations to overcome barriers. Preference patterns changed significantly as women progressed through the life course.

CONCLUSION
Previously unexamined clients’ needs and preferences illuminate new options for planners of integrated services; usable locally in PNG and in global guidance.
Impact of Green Energy Installations on Improving Maternal and New-born Health in Rural Kenya

Co-authors: Gladys Cherotich Ngeno-Options Consultancy Services Ltd; Rachel Grelliier-Options Consultancy Services Ltd; Nicole Sijenyi Fulton-Options Consultancy Services Ltd

Background

Achievement of health outcomes in rural Africa is hampered by a widespread lack of access to stable power supply in health facilities. For maternal and new-born health (MNH), electricity is critical for lighting necessary to conduct deliveries, and power essential equipment such as vaccine and blood storage fridges, incubators and resuscitaire units. In Kenya, between 50 - 75% of health facilities are connected to the national grid[1] and experience frequent power outages.

The health and energy nexus brings together SDGs 3, 7 and 13, where health, clean energy and climate action converge. The World Health Organization defines energy as a critical component for ensuring quality of care.

The Maternal and New-born Improvement (MANI) Project installed 57.5Kwp solar PV lighting in 33 health facilities in Bungoma County to improve MNH services, enabling health facilities to adapt to climate change by lowering their carbon footprint through reduced use of grid energy.

Methods

An on-going evaluation is determining the impact of these green energy inputs at 13 facilities. Thirteen health facilities with remote energy management systems are participating in the study between January – June 2018. Quantitative methods will determine the capacity of clean power generated, cost-savings, and reductions in carbon footprint, and explore potential changes in service delivery statistics and management of complications. Qualitative methods will document the experience and impact of the installations on women and their babies, health workers, and hospital management. Data is being collected from power bills, the solar remote management system, HMIS, and in-depth interviews.

Results

Results will be compared with a similar pre-intervention period. Energy results will be reported in Kwp of clean energy generated and Kgs of carbon evaded together with cost savings. Service delivery results will focus on workloads and management of MNH complications. Client data will report experiences of non-interrupted service delivery and user satisfaction. Health workers’ perceived ability to provide 24-hour quality care, hospital management perspectives on reductions on grid electricity bills, and other relevant perceptions will also be reported.

Conclusion

We will present the study findings and discuss the potential extent and ways in which the health sector can contribute to global carbon footprint reduction while also increasing quality healthcare services by working collaboratively across the energy and health sectors.

Poster Abstracts

Emmanuel Nwala, Population Council, No. 16 Mafemi Crescent, Utako District, Abuja, Nigeria
Poster Number: 282

Examining Actors' Roles and Relationships in Implementing Complex Interventions for Fistula Repair in Nigeria: A Midline Process Evaluation

Co-authors: Emmanuel Kelechi Nwala - Population Council, No. 16 Mafemi Crescent, Utako District, Abuja, Nigeria; Charles Uche Nwaigwe - Population Council, No. 16 Mafemi Crescent, Utako District, Abuja, Nigeria; Solomon Annas Kongyamba - Population Council, No. 16 Mafemi Crescent, Utako District, Abuja, Nigeria

Background: Prioritizing community-health system referrals to mitigate barriers to fistula repair access has been challenging globally. The engagement of multiple actors is paramount in complex interventions to reduce transportation, screening, and information barriers to fistula repair. This study examines implementing actors’ roles, relationships, and interactions in one such complex intervention in Nigeria.

Method: A qualitative midline, conducted as a part of a larger implementation research effort in Ebonyi and Katsina, Nigeria, assessed intervention progress at four months. Thirty-nine in-depth interviews were conducted with a range of actors involved in implementation – including fistula patients (beneficiaries), community and transportation agents, primary health care (PHC) providers, community based organization (CBO) staff, National Obstetric Fistula Centers (NOFICs) staff and Implementing Partners.

Results: Responsiveness to and between actors can be promoted to address barriers facing fistula clients related to transport, screening and awareness when key actors understand their roles and relationships in the community health system. While CBO relationships with other implementers are strong, weaker linkages persist between PHC providers and NOFIC, community and transport agents; leading to gaps in integrating complementary efforts across all actors involved in referral to the NOFIC. Despite high CBO commitment to referral, mixed actor engagement and restraint at fistula repair sites – often mandated by protocols (e.g. need to alternate conditions prior to surgery) – limit access to timely repair. A need for visible identifiers (e.g. badges) for community agents and PHC providers emerge as potential markers of acceptability within the community. PHC providers’ perception of increased workload and request for allowances following initial intervention roll-out raise questions of actor incentives and motivation. Mixed awareness of fistula patients and implementers about intervention components demand sustained strategies around collaborative engagement among actors.

Discussion/Conclusion: Community and health system actor interactions and motivation are integral to helping affected women overcome transport, screening and awareness barriers to reach repair sites. Strengthening existing linkages and building trusted relationships between implementers through active communication and referral may reduce community health system challenges to the provision of effective patient-centered fistula care.
Julie Balen, The University of Sheffield
Poster Number: 283

Examination of Reasons for Irrational Drug Use in the North Bank East Region of The Gambia

Co-authors: Julie Balen- The University of Sheffield; Nicola Love- The University of Sheffield; Deirdre Wholly- The University of Sheffield

Globally, 50% of medications are prescribed, dispensed or consumed irrationally with patients in low-income countries disproportionally affected. Irrational use places considerable pressure on fragile health systems, however the reasons for incorrect prescribing in resource limited settings are not well understood. This study explores irrational drug use in the West African nation of the Gambia using a novel qualitative lens to establish the cultural, structural and socio-economic determinants of incorrect use. Through in-depth semi-structured interviews (n=39) conducted with key informants within the Gambian health system, this research shows that reasons for irrational use are multifactorial, occurring at all levels of the system, and are magnified in the resource-limited setting, with defective supply chains, financial barriers, a lack of diagnostic capacity and inadequate staff training all identified as barriers to rational use. Furthermore, corruption, insufficient regulatory control and a sizeable unrecognised for-profit sector are contradicting attempts towards rational practice in government facilities. These findings have established that irrational practices are common in the Gambia, and have highlighted potential areas where interventions could be implemented to limit inappropriate use. Furthermore, this work has shown the value of qualitative research methodologies in understanding the issue of irrational use.
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Poster Number: 284

**National health systems and the availability, affordability, and use of essential medicines for cardiovascular disease**

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**Background:** Use of cost-effective treatments for primary and secondary prevention of cardiovascular disease (CVD) is suboptimal globally. In low- and middle-income countries (LMICs) in particular, these medicines are unavailable or unaffordable for large proportions of the population. We take advantage of unique data from 21 countries at all levels of development to identify health systems factors associated with availability, affordability, and use of CVD medicines.

**Methods:** We employ estimates from the Prospective Urban Rural Epidemiology (PURE) study for 21 countries (Canada, Sweden, United Arab Emirates, Saudi Arabia, Argentina, Brazil, Chile, Malaysia, Poland, South Africa, Turkey, China, the Philippines, Colombia, Iran, the Occupied Palestinian Territory, Bangladesh, India, Pakistan, Zimbabwe and Tanzania). Using logistic regression, we test the association of availability, affordability, and use of CVD drugs with publicly-available health systems data including health facility and pharmacy density, the presence of drugs on national essential medicine lists, national treatment guidelines, centralized procurement systems for drugs, the level of out-of-pocket spending on medicines, mean length of time for drug approvals, and percentage of government expenditure on healthcare.

**Results:** Analysis is ongoing but preliminary results suggest that the presence of CVD treatment guidelines and the inclusion of all CVD medicines on the essential medicine list are strongly associated with availability. The proportion of government expenditure on health is associated with both availability and affordability. Some countries in our data set performed better than expected in terms of availability and affordability despite having low scores on analysed health systems factors.

**Discussion/Conclusions:** Our study seeks to provide a unique snapshot of national health system factors that affect availability and affordability of CVD medicines. Potential mechanisms by which health system factors may influence availability and affordability are discussed.
Safety Profile of Medication Use During Pregnancy in Mainland China: Based on a National Health Insurance Database in 2015

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Background: The safety of medication use during pregnancy has been a global concern in recent years, however, the current status in China remains unknown. This study aimed to explore the safety of medication use and its influencing factors among pregnant women in mainland China.

Methods: A retrospective drug utilization research was conducted based on China’s National Survey of Medical Service Utilization for Basic Medical Insurance Beneficiaries in 2015. Individual’s Year-round records of medical service utilization were extracted. International Classification of Diseases 10th Revision was applied to identify women aged 12-54 with a singleton delivery in 2015. We assumed a gestational duration of 270 days. Individuals with full records throughout the entire pregnancy were considered eligible sample composition. U.S. Food and Drug Administration (FDA) pregnancy risk classification (A, B, C, D and X) was used to describe the safety of medication use during pregnancy with increasing risk from A to X. The association between FDA D or X category drug use and some maternal characteristics such as age, insurance type, area, delivery type, were examined using multiple logistic regression with adjusted odds ratios (ORs) and 95% confidence intervals (95%CI).

Results: A total of 2896 women with full records of medication use during pregnancy was obtained. In general, 9.6% of them used at least one medication during the entire pregnancy and 186 out of 265 drugs were classified according to FDA pregnancy risk category. Among women with drug exposure, the prevalence of drugs in A, B, C, D and X category was 7.20%, 65.60%, 47.30%, 9% and 6.80%, respectively. Oxytocin, ribavirin and aspirin were the most commonly used D/X drugs. Results of Logistic regression showed that elder women (OR= 1.09, 95%CI 1.02-1.16), and women in middle-western area (OR= 2.85, 95%CI 1.11-6.94) were statistically more likely to use D/X drug during pregnancy (P<0.05).

Conclusions: This study reveals a conservative state of prenatal drug use in China. Further research on the safety of drug use during pregnancy is still in great need to facilitate clinical practice and reduce risk both for the mother and the fetus.
Public Health System Readiness to roll out Population Based Screening and Control of Non-Communicable Diseases in India- Access to Medicines for Hypertension and Diabetes

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Background: Poor access to medicines remains an unresolved major public health concern in India. Expenditure on medicines constitutes highest portion of out of pocket expenditure on health (around 72% in rural and 68% in urban areas). High OOPE is also linked with low utilization of public health facilities. These issues disproportionately affect patients with chronic diseases who need long term treatment and follow up. The Government of India launched a country wide population based program of screening all individuals of 30 years and above for common NCDs (hypertension, diabetes and three cancers viz. oral, breast and cervical) in 2016. It involves team of frontline workers and facility service providers to undertake health promotion, community-based risk assessment, screening, diagnosis and treatment provision. An assessment of health systems is being conducted to aid in implementation and to understand the readiness of public health facilities to provide these services.

Method: The System Readiness Assessment based on qualitative methods was conducted in one district each of 16 states. Data collection methods included facility survey, semi-structured interviews and focused group discussions with service providers, community health workers and community members. As part of the assessment, we compared the availability of antihypertensive and antidiabetic medicines in facilities with National List of Essential Medicines (NLEM). District score was calculated based on availability of medicines across the facilities in a district.

Findings: Significant variation in availability of medicines was observed between and within district facilities. Average district score for antihypertensive medicines was 44% (range 14% to 67%). For oral antidiabetic medicines, average district score was 66% (range 0 to 100%). In 90% cases, insulin was available only at secondary healthcare facilities. Drug management systems with district level purchasing were found to be inefficient compared to centralized procurement. Limited availability of drugs affected prescription practices. Community interactions indicated that patients with pre-existing disease were dependent on private facilities for hypertension and diabetes treatment due to irregular availability of medicines at public health facilities.

Discussion: The gaps from findings raise ethical questions, as screening will increase the expectations from community and non-provision of treatment in public health facility will either lead to use of private sector, thereby increasing the out of pocket expenditure or the condition will be left untreated. This suggests need for specific focus on health system strengthening to ensure regular supply of medicines, to meet the objectives of effectively delivering comprehensive primary care services closer to community.
Community-led advocacy and innovation to strengthen pharmaceutical policy and distribution systems for better drug delivery to people with chronic illnesses in South Africa

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With increasing numbers of people with chronic communicable and non-communicable disease dependent on continuity of life-long treatment, the monitoring, prevention and resolution of medicine distribution problems is critical. We will describe two initiatives that were evaluated in 2016 and that have impacted on pharmaceutical policy and distribution systems in South Africa: 1) the Adherence Club (AC) model for stable HIV+ve patients in Cape Town; 2) the Stop Stockout Programme (SSP) across the whole of South Africa. In both, NGOs and community organisations were key in advocating for change and initiating innovation to strengthen health systems.

ACs for HIV+ve patients: NGOs piloted new models of care for HIV in response to facility congestion, concerns about poor quality of care, and declining patient outcomes in high prevalence areas. The NGOs then worked closely with local government to institutionalise the model which led to improved levels of retention-in-care and viral load suppression. We will focus on the pharmaceutical system changes and challenges that arose in scaling up, including the utilisation of existing privatised drug packaging and distribution through a Centralised Distribution Unit, quick-pickup approaches, lengthening the drug refill period and the role of CHWs in these processes.

SSP: The SSP was formed by six NGOs/CSOs in the aftermath of the 2012/13 Mthatha depot crisis which led to significant drug stockouts. The objectives were both to advocate, through an evidence-based confrontational approach, to the National Department of Health to develop policy and change pharmaceutical distribution systems changes to ensure sustainable delivery of medicines to patients; and to mobilise CSOs and clients to address stockout problems on the ground. We will describe the strategies used by the CSOs (e.g. community mobilisation, a stockout hotline, escalation protocols, annual SSP survey) and the impact that the SSP has had on completely changing the national drug distribution system and on drug availability.

Both initiatives illustrate how NGOs, CSOs and communities can use different advocacy approaches to change pharmaceutical systems but with similar outcomes. In the AC programme, the NGOs developed a functional model and then supported government in implementing, institutionalising and scaling up this model. In the SSP the NGOs/CSOs used a twin approach of community mobilisation and national level advocacy to substantially alter the national drug distribution system. The approaches illustrate how different advocacy approaches are needed in different contexts and the importance of continuous monitoring to ensure continued quality of service when scaling up.
A Nationwide Assessment on the Knowledge, Attitude and Practices among Filipino Physicians on Ethical Relations with the Pharmaceutical Sector

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Background. Physician interaction with the pharmaceutical industry is inevitable. Drug prices are intertwined in this relationship. Philippines is reported to have one of the highest drug prices in the region. The Mexico City Principles (MCP) is a set of business ethics principles designed as guidance to the industry's practices. The Philippine Department of Health (DOH) and the Food and Drug Administration (FDA) adopted MCP in 2015, as an administrative policy instrument to guide local industry practices. DOH commissioned this study as baseline assessment among prescribing physicians, to inform policy.

Objectives. We aimed to describe the knowledge, attitude, and practices of Filipino physicians towards interactions with the biopharmaceutical sector.

Methods. We conducted a prospective cross-sectional study using a self-administered survey questionnaire. Multi-stage purposive maximum variation sampling strategy was implemented. Survey was structured into three domains (knowledge, attitude and practice). The survey tool was subjected to content and face validity, and pre-testing. Descriptive statistics and correlation studies were used to describe how these domains pan out according to physician characteristics (e.g. age, specialization, place of practice).

Results. We analyzed a total of 2,030 responses. The level of awareness of the MCP among Filipino physicians is low, gained through informal conversations rather than in formal venues. Yet, physicians prefer to receive information through formal channels. Attitude towards industry relations tends to be favorable if interaction is perceived to benefit patients and facilitate information exchange. Incidentally, respondents recognize that these same interactions influence increased medicine prescribing. Respondents report that there are still practices among their peers that can be considered “excessive” or unethical. Survey results reveal a low appreciation of the concept of conflict of interest. Workplaces, colleagues and role models provide an accepting environment for physician-pharmaceutical interactions.

Conclusion. Knowledge on the MCP is low and mainly through informal channels. There is favorable attitude and supportive practice towards interactions deemed to be beneficial for patients. Government has limited resources and capacity to be the sole regulator of industry-physician interactions. Self-regulation of professionals and industry through enabling environments should be considered. Academic and training institutions, hospitals and professional societies are vital institutions that can influence physician-pharmaceutical interactions.
The potential for Academia to advance the SDG agenda through multisectoral relationships, networks and partnerships: A modified mixed-methods study

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Background: Academia–and Schools Public Health in particular–have an important role in ensuring that SDG3 is realized through multi-sectoral research and partnerships. Relationships between academic faculty and decision-makers have been documented as an important factor in the evidence-to-action process. However, knowledge about the breadth, depth and nature of these relationships often remains unknown therefore rendering the potential for multisectoral influence untapped, inefficient, uncoordinated or redundant.

Objectives: The purpose of this study was to explore and understand the size, breadth, depth and variety of government networks held by faculty at The Johns Hopkins Bloomberg School of Public Health (JHSPH). Innovative approaches to measuring network metrics and understanding the nature of relationships was required. Particular attention was paid to partnerships peripheral to the health sector that impacted health policies and programs.

Methods: Between May-December 2016, 211/ 627 (34%) of eligible JHSPH full-time faculty participated in a sociometric survey eliciting relationships with decision-makers at city, state, federal and global levels. Social Network Analysis (SNA) permitted mapping of networks using UCINet. Traditional measures for network depth and breadth required amendment due to the unique approach to the relationships. This was complemented by interviews with 52 faculty (Nov 2017-Feb 2018) exploring the nature of partnerships that resulted in multisectoral interventions to improve health.

Results: JHSPH relationships span networks across over 100 government departments at city, state, national, and international levels, close to 700 individual decision-makers, and 45 country governments. These included Departments of Health, Education, Social services, Police, Fire, Planning, Public works, Agriculture, Commerce, Energy etc.. Engagement was not restricted to the public sector with several examples including the private sector, media, and advocacy coalitions. Factors affecting the size, breadth and depth of networks included structural, topical, personal and experiential aspects amongst others. Examples of effective partnerships underscored the importance of trusting relationships, a mutually beneficial agenda, overcoming political and structural challenges to interagency collaborations, and creative approaches to financing programs that span multiple agencies affecting the health system.

Conclusions: The unique role of SPHs in engaging in multisectoral agendas and activities to advance SDG3 cannot be emphasized enough. A mixed-methods approach using SNA as well as interviews can provide insight into the depth, breadth and nature of networks, as well as an institution’s overall potential to influence policy and practice across sectors. Given the complexities of each sector and the agencies within, creative means of approaching each partnership can yield encouraging results.
Health systems reform focusing on multisectoral collaboration to achieve the Sustainable Development Goals: the case for epidemiologic transition in Bangladesh

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The 2030 Agenda for Sustainable Development recognizes non-communicable diseases (NCDs) as a major challenge for sustainable development. As a signatory to the Sustainable Development Goals (SDGs), Bangladesh is committed to reform health systems to achieve the SDG targets that include reducing NCD burden. This paper examines the trend of broad cause of death categories over the last 30 years and estimates the resource available for managing the NCD burden in Bangladesh through the ongoing sector-wide approach (SWAp) for the health sector.

This study assesses level and trend of mortality from a Health and Demographic Surveillance System (HDSS), by utilizing cause of death data for 1986–2016 from verbal autopsies. Data from 2014 and 2017 rounds of nationally representative, cross-sectional health facility surveys are used to examine the health systems readiness to manage NCDs. Fund allocation for NCD-related activities under the health SWAp is estimated through in-depth review of program documents that include contributions from the government and the donors for Bangladesh health sector.

During 1986–2016, proportion of deaths due to communicable diseases declined from 52% to 10%, whereas deaths due to NCDs increased from 8% to 69% of total deaths. Review of trajectories of disease burden and age-standardized mortality rates indicates that Bangladesh is currently at an advanced phase of the third stage epidemiologic transition, and mortality due to cardiovascular diseases (CVD) and cancers is expected to increase very rapidly in the coming years. Given the disease burden, Bangladesh currently requires nearly US$ 145 million every year to implement an effective intervention package tackle the NCDs. Availability of fund for tackling NCDs under the current heath SWAp is grossly inadequate in comparison to the requirement estimated for Bangladesh. Less than 5% of the total SWAp financing was allocated for NCDs over 2017–22, resulting in US$ 120 million shortfall every year. Currently, less than 20% of health facilities can provide services for major NCDs like diabetes or CVD—mainly due to unavailability of trained staff and guidelines.

Based on the findings, this paper recommends specific reforms to strengthen the health systems for managing major NCDs. Recommendations also include several innovative mechanisms for mobilizing additional resources for NCDs, and call for multisectoral collaboration between health, education and social protection sectors to assure efficient channeling of financial resources for NCD management. SDGs provide an excellent opportunity for Bangladesh to develop and implement sustainable solutions to tackle NCDs in the coming years.
An evidence-based activity map for the planning and implementation of sustainable health system initiatives – putting results of a scoping review into action

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Background

The sustainable development goals are a universal call for action to build a sustainable future for people and the planet. To archive good health and well-being for all, health system (HS) initiatives have to address cross-cutting and collective fields of action within and between the social, economic and ecologic dimensions of human development. To do so, these initiatives have to operate from their early beginning on in a complex, multi-actor landscape with multi-sectorial interactions. We developed an evidence-based, multi-level activity map for the planning and implementation of sustainable HS interventions that is used within a research project on Health Information System interventions conducted in Côte d'Ivoire, Mozambique and Nigeria.

Methods

To identify components and levels of activities to plan and implement sustainable HS interventions, we conducted a systematic review designed as a qualitative scoping review. We searched for definitions of, and frameworks for, sustainable HS interventions. The extracted textual data was synthesised and rearranged into an activity map for sustainable HS initiatives.

Results

Our database search yielded 1647 studies. We assessed eligibility for 55 studies and finally included nine systematic reviews and seven primary research articles. We identified six main components of sustainable HS interventions: health; human capacities; continuation over different time points; the use of resources (financial, infrastructural and human); the projects' integration within the HS; and the projects' response to the needs and interests of HS actors. A lack of consideration of the ecologic impact has to be noticed. On a structural dimension, we identified characteristics and capacities of HS internal and external entities on the macro-, meso-, and micro-level of the HS. We also identified procedural components on the different HS levels creating fields of actions for different actors. We rearranged the identified components, structures and processes into a three dimensional activity map, where activities of an initiative can be mapped, and their effects monitored for each sustainability component across the three HS levels.

Conclusion

To be sustainable, HS initiatives need to put theory into action not only for health related outcomes, but also for social, economic and – often neglected – ecological impacts of their activities. An action map informs not only project managers about different scenarios, but also enables HS initiatives to engage with other HS actors on interactions and impacts on the different dimensions of sustainable development for all stages of an initiative’s life cycle and beyond.
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Poster Number: 292  

Intersectoral collaboration for health in the Western Cape Province: competing frames during early stages of policy development  

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While intersectoral collaboration is considered valuable and important for achieving health outcomes, there are few examples of successes. The literature on intersectoral collaboration often highlights multiple barriers that can hinder collaborative efforts with very little evidence of how the process of collaboration unfolds in real settings. It suggests that success relies on a shared understanding of what can collectively be achieved and whether stakeholders can agree on mutual goals or acceptable trade-offs if there are any conflicting interests. When health systems are faced with negotiating multi-sectoral responses to complex issues, achieving consensus across sectors can be particularly challenging. Stakeholders may have different framings of “the problem”, based on their disciplinary background, interests and institutional mandates.  

This study draws attention to how frames are negotiated during decision-making on intersectoral action, using the case of an early childhood initiative led by the health sector in the Western Cape Province of South Africa. It triangulates data from a document review of official policy documents with observations of decision-making processes, to create a typology of frames, paying attention to significant moments during the policy formulation process, negotiations and the change of frames since the initiative rose to the agenda. It thus focuses on the process of collaboration during a phase of the policy process where key directions are negotiated.  

Early findings suggest that frames used to motivate attention to early childhood in various sectors have different goals (social development, educational, health, economic) which relate to strategies prioritised and levels of proposed intersectoral action. This study aims to shed light on a rarely documented stage in the policy process and will allow lessons to be drawn on the factors enabling and constraining intersectoral collaboration, in particular how competing frames influence the achievement of shared goals and objectives across sectors.
Tracking multi-stakeholder partnerships in development assistance for health in the Sustainable Development Goal era: An analysis of donor financing of nongovernmental entities in developing countries

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Background

Leveraging lessons learnt from the MDGs implementation, the Sustainable Development Goals (SDGs) cover a range of economic, social and environmental issues that require multi-stakeholder partnerships to address. Goal 17 – Partnerships for the Goals - encapsulates the importance of collaboration for the attainment of the goals. Provision of development assistance is one area in which multi-stakeholder partnerships has had mixed results. In many developing countries, non-governmental organizations are a powerful force in the delivery of development assistance. In the health sector, in 2016 alone, high-income countries and development agencies provided $37.6 billion (in 2015 US dollars) towards the maintenance and improvement of health in low- and middle-income countries. Non-governmental entities received approximately thirty percent of this total disbursement. Whereas previous studies have identified the major channels through which resources are transferred, few studies have examined in detail the characteristics of funds received by non-governmental entities in the health sector. This is important given the amount of resources disbursed through NGOs.

Objective

This study characterizes the development assistance for health funds received by non-governmental entities, describing the trends, types of activities and health focus areas targeted.

Methods

We utilize data from the Institute for Health Metrics and Evaluation’s 2017 database on development assistance for health. The estimates in the database are generated using data from development agency databases such as the Organization for Economic Cooperation and Development and the World Bank that track development assistance. We categorize funding as assistance through government, nongovernment and other based on the primary recipient in a country. Our data series spans 1990 through 2016.

Findings

Preliminary results show that the amount of donor funding received by non-governmental entities increased from 888 million in 1990 to 14 billion in 2016 (in 2015 US dollars) whereas that received by government entities increased from 775 million to 10 billion. Majority of the funds for maternal health, non-communicable diseases, and other infectious diseases were received by non-governmental entities whereas most of the funds for HIV/AIDS, tuberculosis and health system strengthening/sector wide approaches went through government entities. Private philanthropies and the US provided the majority of these funds.

Interpretation

NGOs working in health mobilize a significant share of their resources from international donors. The diverse health areas in which they work suggests that they can be leveraged meaningfully in partnerships. Patterns identified through this study can inform strategies for cultivating strong partnerships in other sectors in furtherance of the SDGs.
Using Social Network Analysis to understand Ethiopian Health Worker Advice Networks

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Background: The movement from Millennium Development Goals to the Sustainable Development Goals has introduced an era of increasingly competitive funding and attention for public health. Innovative approaches are needed to maximise resources. One possibility could involve using existing health care worker professional advice networks to more efficiently introduce, scale up or change health programmes. Ethiopia, with its centrally managed national primary healthcare service delivery platform is a uniquely-suited context for such an approach. Primary healthcare units—central to this platform—include a health centre and typically five satellite health posts. Nurses, midwives and health officers staff health centres and health extension workers, a cadre of community health workers, staff health posts. This cross-sectional, mixed-methods, observational study provides foundational information on existing professional advice networks among healthcare providers at primary health care units.

Methods: 160 staff at eight primary healthcare units across four regions participated in the study. The structured network survey tool captured the frequency of healthcare worker advice exchange over the past year on providing antenatal, childbirth, postnatal and newborn care. Following quantitative network analyses, 20 semi-structured interviews were conducted with purposively selected network study participants. Data were entered, analysed or visualised using Excel 6.0, UCINET 6.0, Netdraw and MaxQDA10 software packages.

Results: The following average network level metrics were observed: density .26 (SD.11), degree centrality .45 (SD.08), distance 1.94 (SD.26), number of ties 95.63 (SD 35.46), size of network 20.25 (SD 3.65). Advice networks were more utilized for antenatal and maternity rather than postnatal or newborn care service delivery questions. Midwives and fellow primary healthcare unit staff were preferred; however, supervisors were not featured prominently. Level of training and knowledge were valued over experience. Advice exchange took place in person or over the phone. There were few barriers to seeking advice.

Conclusion: Prior to this study there had not been a published network study of professional advice exchange among primary healthcare providers in Ethiopia. In a highly structured, hierarchal context it was illuminating to observe informal, inter-and intra-cadre advice networks. Additional research is needed to better understand what represents a healthy professional advice network through associating these network metrics with performance metrics. Additional research could test models for harnessing these existing advice networks to promote or change service delivery. These types of analyses are at the frontier of network analysis and would hold the most value for public health systems research and practice.
A Study of the Evaluation Framework of People-centered Integrated Health Care System in China

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Background: In recent years, countries with different health care systems are all exploring to build people-centered integrated health care system. There is a consensus that it is of key importance to build an evaluation framework for people-centered integrated health care system based on national circumstances, which lays the solid foundation for the establishment of an evaluation index system, and will benefit the development of the system. However, efforts are still at the early stage in both theory and practice, and a widely accepted evaluation framework serving China's reality is still missing. As a result, it is of both great theoretical and practical significance to build such an evaluation framework.

Methods: We employed literature review and content analysis to collect and screen pertinent literatures from both China and abroad to build a preliminary evaluation framework. Expert consultation was sequentially adopted to improve the framework through email communications with 20 experts and practitioners in the related field in China.

Results: The evaluation framework consisted of 4 first-level indicators and 26 second-level indicators. Core functional integration, value and normative integration ensured connectivity between the levels. The first-level indicators were divided into 3 aspects: macro (system integration), meso (organizational and professional integration), and micro (care integration). System integration included 7 second-level indicators (governance and regulation system, financing and payment system, healthcare delivery system, health workforce system, pharmaceutical supply system, information system, and social values). Organizational integration included 7 second-level indicators (governance structure, performance assessment and accountability, interests and responsibilities sharing, organizational structure and function, inter-organizational collaboration, resource joint construction and sharing, and inter-organizational shared vision). Professional integration included 4 second-level indicators (interdisciplinary norms and standards, interdisciplinary collaboration, incentive and restrictive mechanism, and interdisciplinary compatible values and culture). Care integration included 8 second-level indicators (continuity, availability, comprehensiveness, coordination, clients preferences, healthcare providers service sense, quality, and clients experience and participation). The expert positive and authority coefficient were 0.85 and 0.8, respectively. The score for all indicators was above 7.5, and the variation coefficients was all below 0.2.

Conclusion: This evaluation framework has been unanimously approved by relevant Chinese experts and scholars. It is of great significance to the localization and construction of the theory and evaluation framework of people-centered integrated health care system in China, and is important to promote the development of such a system in China and other developing countries.
Human-Centered Design (HCD), as applied in global health, is a mindset, process and set of techniques whose purpose is to put the needs, desires and voices of the end user at the forefront of social change. HCD is increasingly used in global health programming, yet there is limited evidence of its influence and added value.

The purpose of this paper is to report on the use of human-centered design practice in three maternal, newborn and child health (MNCH) projects in Africa and explore its role in engaging community members and community-based health workers as drivers of health program design and implementation. From 2009 to 2012, prospective studies on HCD were conducted in Ghana and Sierra Leone using a mixed method, case study approach and results were compared across the three cases. End users in these cases were defined as traditional birth attendants, community health workers, health service clients and community influencers. Human-centered design processes such as immersion, co-creation, user personas and rapid prototyping gave a prominent role and voice to those community-level actors in key aspects of program design. Through this process end users were consulted frequently to test the effectiveness of implementation strategies and program managers adapted interventions based on user feedback. HCD played a role in the rapid acceptance by TBAs of a new role as health promoters in Sierra Leone and supported rapid uptake and use of a mobile phone application to improve health workers job satisfaction and motivation among community health nurses in Ghana. It had mixed effect on maternal health seeking practices and community influencer behaviors in northern Ghana. The audience for this paper is implementers and health care providers, researchers, policy makers and donors. The technical content focuses on user-center program design methods, acceptability and effectiveness community health care, and maternal newborn health in developing country public health institutions and safety net organizations. There is a growing need for fresh approaches to define barriers to better health and solutions to addressing these barriers from the vantage point of and in collaboration with clients, communities and the health workers. It is no longer adequate to design programs based on normative assumptions about user perceptions. This paper will increase understanding of and stimulate debate related to the potential for HCD to generate deeper insights into the health-related needs of populations, transform the way health care is delivered, and our ability to reach all population groups effectively.
Person-Centered Maternity Care in Low- and Middle-Income Countries: Analysis of Data from Kenya, Ghana, and India

Co-authors: Patience Afulani-University of California, San Francisco; Beth Phillips-University of California, San Francisco; Raymond Aborigo-Navrongo Health Research Centre; Cheryl Moyer-University of Michigan

Background

Several qualitative studies have described disrespectful, abusive, and neglectful treatment of women during facility-based childbirth, but few studies document the extent of person-centered maternity care (PCMC) in low- and middle-income countries (LMICs). We aimed to examine PCMC in diverse settings in LMICs.

Method:

We examined data from four cross-sectional surveys with recently delivered women in Kenya, Ghana, and India. Kenya data were collected from a rural county (N=877), and at seven health facilities in two urban counties (N=530). Ghana data are from five rural health facilities in the Northern Region (N=200); and India data are from 40 facilities in Uttar Pradesh (N=2018). The PCMC measure used is a previously validated scale with subscales for dignity/respect, communication/autonomy, and supportive care. Analysis includes descriptive and bivariate statistics.

Results:

The highest PCMC score across the four settings was found in urban Kenya (60.2 out of 90), with the lowest in Ghana (46.5). Across sites, the lowest scores were in the domains of communication and autonomy. Across all samples, more than three-quarters of women reported the providers never introduced themselves. Over a third of respondents across all samples (and up to 70% in India) reported providers never asked permission before doing procedures on them. Many providers also did not explain the purpose of the examinations, procedures, or medications (about 20% in Kenya and more than 50% in Ghana and India), and women did not feel able to ask questions (over 50% in Ghana).

More than 40% of women in the Ghana and India sample did not feel they were involved in their care, and between 40% and 70% of women in the Kenya and Ghana sample did not feel they could be in a position of their choice during delivery. Nearly half of women in the urban Kenya sample were not allowed a companion during labor and 70% in the Ghana sample were not allowed a companion at delivery. Between 10 and 20% of women across all the samples reported some verbal abuse, but less than 5% reported any physical abuse.

Conclusions:

Across four different study settings in three countries in sub-Saharan Africa and Southeast Asia, women are not getting person-centered care during childbirth in health facilities. More efforts, such as training providers on PCMC and putting in place accountability mechanisms to reinforce PCMC, are needed to improve PCMC in LMICs.
Ensuring Universal Access to Treatment and Care for Drug-Resistant Tuberculosis: Implementation of a Patient-Centered Approach and Decentralized Model of Care

Co-authors: Franciscka Lucien-Partners In Health; Joseph Kuye-National Leprosy & Tuberculosis Control Program; Ernest Cholopray-National Leprosy & Tuberculosis Control Program; Daniel Dure-Partners In Health; Abdissa Kabeto-Partners In Health; Watta Kamara-Partners In Health; Jason Beste-Partners In Health; Maxo Luma-Partners In Health; Dedeh Kesselly-National Leprosy & Tuberculosis Control Program

Background:
Liberia's National Leprosy and Tuberculosis Control Program (NLTCP) has made significant strides in increasing case detection, in particular for drug-resistant tuberculosis (DRTB). The care enrollment gap decreased from an approximate 20 patients enrolled on treatment in 2015\[i\] (4, 6% of the expected\[ii\]) to 117\[iii\] patients (27%) in 2017. Case detection rate should rapidly increase for Liberia to achieve the endTB goals. Prior to 2017, Liberia had one national referral center for DRTB treatment requiring patients from across the country to receive twenty-months of treatment out of the 30-bed capacity, Monrovia-based facility. Increasing case detection requires increased capacity for treatment and care, necessitating implementation of successful strategies.

Intervention Approach:
Together with Partners In Health, NLTCP launched the first fully decentralized facility for DRTB care and treatment in October 2017. JJ Dossen Hospital in Maryland County was selected as the initial site for decentralization of DRTB through close review of several criteria by NLTCP and its technical partners. Location and facility selection for decentralization were based on a mix of factors including case load and expected patients to be reached, available service delivery platform for treatment initiation and monitoring, and appropriate infrastructure for infection control.

Result:
Since the start of the intervention, DRTB patients have benefitted from comprehensive care and robust psychosocial support at the new facility. On-site GeneXpert capacity provides essential diagnostic capacity to screen, diagnose and initiate new cases on treatment. In addition to two (2) new patients diagnosed and enrolled on treatment, six (6) additional patients active on treatment have been down-referred from the national referral facility. Among them two (2) completed treatment under the management of the decentralized team.

Conclusion:
The decentralization of DRTB treatment & care is designed to bring care at the appropriate levels as close to the patient as possible through a patient-centered model intended to increase treatment adherence. As efforts continue to advance towards universal access to treatment and care for DRTB, programmatic learnings can be applied to expanding decentralized services. The implementation of a patient-centered approach demonstrates the success of strategies to support the increase in number of cases identified and initiated on treatment, while also strengthening systems for improved DRTB care and treatment.

\[i\] NLTCP data
\[ii\] 2017, World Health Organization, Global Tuberculosis Report
\[iii\] NLTCP data
The association between clinical quality and person-centered care in high-volume facilities across Uttar Pradesh, India

Co-authors: Beth Phillips-University of California-San Francisco; May Sudinaraset-University of California, Los Angeles; Shreya Singh-Community Empowerment Lab, India; Dominic Montagu-University of California, San Francisco; Shambhavi Singh-Community Empowerment Lab, India

Background. India’s most populous state, Uttar Pradesh, also has the second highest maternal mortality ratio at 285 compared to the national MMR of 167. Reports of disrespect, abuse and other types of mistreatment during childbirth and delivery are commonly cited by both the scientific community and popular media. This has resulted in global initiatives to focus on person-centered care – providing care that is responsive to women’s preferences, needs, and values. This study aims to identify what enables high volume facilities (>200 deliveries/year) to provide both better clinical and person-centered maternal health care. To achieve this objective, we triangulate data from 40 high-volume facilities in Uttar Pradesh, including data on labor and delivery patients, facility-level clinical quality data, and health providers to determine how clinical quality is associated with person-centered care. Additionally, we will use provider insights to inform possible mediating factors to guide potential intervention points.

Methods. The mixed-methods study was conducted in 40 high-volume, public health facilities in 20 districts of Uttar Pradesh. We selected 20 high-performing and 20 low-performing facilities from among 208 high-volume facilities (>200 deliveries/month), using government health data, stratified by facility type and geography. From August to November 2017, we evaluated the maternal health clinical quality and person-centered care quality at these 40 Q+ sites via delivery patient and provider surveys (N=2018, N=251, respectively), qualitative interviews with health providers (n=48), and health service readiness checklists (n=40). We conduct logistic regressions and thematic analyses on our mixed-method results.

Results. Across all study sites, women delivering in higher clinical quality have higher odds (0.94) of reporting worse person-centered care (p<0.05). Looking at specific PCC indicators, we found higher odds (p<0.001) in verbal abuse, providers not introducing themselves, and not explaining exams to women as clinical quality improves (p<0.001). While women were less likely to deliver with an unskilled birth attendant in higher quality facilities, even among these facilities (n=20), over 10% of women (n=96 of 860) report delivering alone, with a friend, relative or hospital cleaner.

Conclusion. While higher-level facilities typically have better clinical care than smaller centers and hospitals in UP, they seem to also provide worse patient treatment – care, support, and clinical practices such as clinical provider presence during delivery. This preliminary mixed data analysis of our study findings demonstrates that efforts to improve PCMC must exist within a context of broader health systems strengthening.
Nicole Minckas, STEMA/Institute for Global Health, University College London
Poster Number: 300

**STEMA: a guiding framework towards innovative, integrated, people-centered healthcare in low resource settings.**

Co-authors: Nicole Minckas-STEMA/Institute for Global Health, University College London; Geordan Shannon-STEMA/Institute for Global Health, University College London; Des Tan-STEMA/Institute for Global Health, University College London

Health systems in low resource settings operate under a growing burden of health needs. The utilization of resources in an innovative, efficient and integrated way is becoming more important than ever to accomplish the goal of achieving UHC, contributing to health equity and improving access to quality essential health-care services. Despite rapid advances in technology, design and social innovation, these do not always translate into sustained or improved health outcomes. Transforming these global aspirations into tangible health outcomes for people living in the most marginalized locations around the world is a challenge.

Since the launch of the SDGs in 2015, researchers and policy-makers around the world have been trying to find strategies to achieve high-quality, accessible and culturally appropriate health interventions. However, there are still more than 400 million people globally that lack access to essential health-care, mainly in low and middle-income countries. Resource availability is not enough; we must think beyond this towards health systems innovation.

Although innovations have been positioned as essential to overcoming health inequity, they must be informed by the local context, and involve the full participation of those receiving it; otherwise, indiscriminate use of technology may reinforce social inequities. They must be designed for and coordinated with the community, considering their perceived needs to ensure acceptance, effectiveness, and sustainability.

To bridge theory and practice we have developed a framework that is simultaneously context-specific (and patient-centered) and internationally relevant/comparable. It brings together academic literature, field work, and case studies. It starts from the assumption that only with the support and motivation of community members can we achieve a sustainable change by recognizing their social and cultural norms while maximizing the efficient use of local resources. It connects three fundamental dimensions: a people-centered and integrated health system, the local health systems constraints and barriers, and adequate, available and accessible innovations. By tackling each dimension and maintaining the communities at the center we are bridging the gap between evidence and implementation, and thus contributing to sustainable health systems towards UHC.

This is a first step in the development of a decision-support system that bridges academic and practical, local and global, as well as public and private spheres to optimize health service provision. With an exponential increase in health innovation, there is a need to coordinate actions from researchers, entrepreneurs, policy-makers and the private sector to interface global innovation with the cultural, social and economic variability between contexts.
Battling Corporate Policy Interference: A Case Study on the Implementation of the 85% Health Warning Labels in India

Co-authors: Connie Hoe- Johns Hopkins Bloomberg School of Public Health; Caitlin Weiger- Johns Hopkins Bloomberg School of Public Health; Joanna E. Cohen- Johns Hopkins Bloomberg School of Public Health

Background: On October 15, 2014, India’s Health Minister Dr. Harsh Vardhan notified larger health warning labels (HWLs) that would increase the size of the warnings to 85% of the front and back of each tobacco pack. Implementation, however, was delayed for more than a year as a result of industry interference. Addressing the tobacco epidemic requires the adoption and implementation of evidence-based tobacco control policies like HWLs that are consistent with the World Health Organization Framework Convention for Tobacco Control. While tobacco control policies have been adopted across the globe, implementation continues to be a major challenge, particularly in low and middle-income countries (LMICs) like India. One of the commonly cited barriers is industry interference. Consequently, understanding the factors that lead to the successful implementation of evidence-based policy in LMICs is critical.

Method: Under the guidance of a framework adapted from the Advocacy Coalition Framework and Transnational Advocacy Networks, a case study approach was used to understand the process and determinants that led to the implementation of the 85% HWLs in India. Data were gathered from key informant interviews (N=22) and document review (N= 68) between June and September 2017 and analyzed using inductive and deductive coding.

Results: Findings showed that two coalitions vied to translate their beliefs into policy in the tobacco policy subsystem: 1) proponents of the 85% HWLs, and 2) opponents of the 85% HWLs. The appointment of physician and tobacco control advocate, Dr. Harsh Vardhan, as Health Minister served as an external shock to the system, providing proponents with an opportunity for action. These proponents worked collaboratively to launch a well-design advocacy campaign grounded in scientific evidence to refute the arguments used by the opponents. Focusing on three complementary tactics – litigation, media advocacy and lobbying – these proponents defeated the rather fragmented opponents when the Supreme Court ordered the implementation of HWLs in 2016.

Conclusion: This case illustrates the need for advocates to be well-versed in the scientific evidence surrounding the harms of tobacco use and the effectiveness of the policy measure they are defending, develop a thorough understanding of the political context, work collaboratively, and involve a skilled legal team that is prepared to defend the issue in court.
Felix Obi, Health Policy Research Group  
Poster Number: 302  

Enacting Health Financing Reform Laws Is Not Enough: lessons from the delayed implementation of the Basic Health Care Provision Fund in Nigeria  

Co-authors: Felix chukwudi Obi-Health Policy Research Group; Emmanuel Abanida-Health Reform Foundation of Nigeia; Oyindamola Adedapo-Health Reform Foundation of Nigeria  

Background: Although health is regarded as a fundamental human right, the 1999 Nigerian Constitution had no specific provisions to protect and guarantee unhindered right of access to quality and affordable health care to Nigerian citizens. After a 10-year delay, the two arms of Nigeria’s legislature in 2014 concurrently passed the Bill, which was signed into law as the 2014 National Health Act (NHAct) by the President following sustained advocacy by the Health Sector Reform Coalition (HSRC)- a network of civil society organizations. Without prejudice, the NHAct guarantees all Nigerians free access to a basic minimum package of health services to be provided through the Basic Health Care Provision Fund (BHCPF); to be funded annually from at least 1% of the Consolidated Revenue of the Government. Following the transfer of political power to Nigeria’s opposition party in 2015, expectations were high that the new government will implement the BHCPF. Although the process of operationalizing the NHAct commenced in 2015, three years afterwards, the BHCPF has yet to be established despite promises and assurances from both the legislature and the executive arms of government.

Methods: The review adopted a qualitative approach. Data collection involved review of relevant documents, and key informant interviews with respondents selected through purposive sampling based on their involvement in the NHAct implementation process.

Results: The HSRC facilitated the release of official gazette of the NHAct after 12 months of delay, while the Guidelines for the Management and Disbursement of the Basic Health Care Provision as well as the Basic Minimum Package of Health Services were approved by the National Council on Health in 2016. Low political will and prioritization of the NHAct by the Government, lack of funding due to non-provision of budgetary allocation, over-dependence on donor partners, low engagement of states and non-state actors, low awareness of the NHAct by citizens have delayed the implementation process. Despite advocacy campaigns by civil society to the parliament and the executive, there has been a major push-back from some key ministries responsible for statutory allocations to health due to perceived inefficiencies and poor health budget performance against expected outcomes. Consequently, FMOH is planning a pilot in selected states to kick-off in 2018 as proof of concept to support investments into the BHCPF.

Discussions/Conclusion: While strategic partnerships and collaboration between FMOH and partners helped kickstart the BHCPF implementation process, sustainable financing of UHC initiatives however depends largely on the government’s domestic funding.
Poster Abstracts

Ajay Patle, National Health System Resource Center, Ministry of Health & Family Welfare
Poster Number: 303

Innovation as a tool for policy-making and health system strengthening: a systematic scoping review from India

Co-authors: Ajay Patle-National Health System Resource Center, Ministry of Health & Family Welfare; Puja Ambule-Central TB Division, Ministry of Health & Family Welfare

Background:
India has been acknowledged for frugal innovations, better known as ‘jugaad innovation’ across the international business circles. In healthcare industry, the current challenges are to improve quality, reduce harm, improve access, increase efficiency and lower costs. The motto has been “Getting More (performance) From Less (resource) For More (people)”. Ministry of Health and Family Welfare, Government of India has encouraged piloting and scaling up innovations and good practices in healthcare sector to improve health outcomes in India. Innovations proves to have a high impact to address morbidity, mortality and strengthen health systems, it also act as tool for policy making

Methods
A systematic scoping review was used to review the health literature on innovations which were presented in Four National Summits on best practices and Innovations organised by Ministry of Health & Family Welfare, India and map the scale-up of these best practices at the National, State, District and Local system levels. Also, how these innovations influence policy-making at different level based on evidences. Stakeholder feedback on the identified innovations was taken to test and develop the findings.

Results
Following available database and manual searches, 30 best practices/Innovations met the inclusion criteria: 24 were of sufficient methodological quality to be included in the thematic analysis. Selected innovations are scaledup at national level or in more than three states of the country. Evidence use in policy-making and scaleup of these innovations is influenced by multi-level processes (National, State, local system) and interactions across these levels. Preferences for scaleup vary by professional group and health service setting. Political processes at all levels shape the selection and use of evidence in policy-making.

Discussion
The synthesis of results from primary qualitative studies found that evidence use in policy-making and scaleup of innovation is influenced by processes at multiple levels. Interactions between different levels shape the evidence use in policy-making. Decision makers need to consider the environment for scaleup of innovation and stakeholder perspectives. Further qualitative research on policy-making practices that highlights how and why different types of evidence come to count during decisions, and tracks the political aspects of decisions about innovation, is needed.
Strategies for clinical guideline implementation in the Brazilian Unified Health System

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Background The process of development and updating of the clinical guidelines for the Brazilian Unified Health System (Sistema Único de Saude, SUS) is already well systematized by the Brazilian Ministry of Health. However, the implementation process of those guidelines has not yet been discussed and well structured. Therefore, a partnership project to elaborate a validated framework for the implementation of clinical guidelines to be used within SUS is being developed by the Brazilian Ministry of Health Department of Management and Incorporation of Health Technologies (DGITS) and the Oswaldo Cruz Foundation (FIOCRUZ). The first step of this project is to develop a review of the scientific literature with the aim of identifying (i) the effectiveness of strategies used to promote guideline implementation and (ii) the barriers to their adoption.

Methods This overview used systematic review methodology to locate and evaluate published systematic reviews regarding strategies for clinical practice guideline implementation and adhered to the PRISMA for systematic review protocols (PRISMA-P). The search terms were related to “guideline” (Guidelines, Clinical Protocols, Critical Pathways, Consensus and Health Planning Guidelines) and “implementation” (adherence, compliance, dissemination, accordance, concordance, adoption, barriers), which were adapted according to bibliographic databases.

Results This overview identified 32 systematic reviews (1,134 primary studies) regarding strategies targeting healthcare organisations, healthcare providers and patients to promote guideline implementation. The most frequent strategies in the selected studies were educational meeting, educational materials, reminders, and audit and feedback. The results were mixed but, in general, there were moderate effects on process outcomes. Additionally, we identified the following barriers: i) Organizational-related barriers (Time; human resources; financial constraints; lack of organizational support; lack of engagement of guideline implementers; lack of training; workflow); ii) Guideline-related barriers (Evidence on which it is based; impracticality of the guideline; complexity; lack of universal acceptance of recommendations); iii) Healthcare professional-related barriers (Reluctance to change; skepticism; disagreement with the guideline; loss of autonomy; lack of knowledge of guidelines; knowledge deficits; suboptimal communication; disbelief that a change in physician behavior will affect clinical outcome); and iv) Patient-related barriers (Inability to convince patients of the need for a particular medical approach; noncompliance; non-reporting of symptoms; patient preference).

Conclusions This overview provides a broad summary of the best evidence on guideline implementation to subsidize strategy choice decision-making adequate for each context (national, regional, local levels), thus seeking to positively impact on health care outcomes and on the sustainability of the Brazilian Unified Health System.
Health Communication in outbreaks: the pivotal role of community level media during the Ebola outbreak in Sierra Leone

Background:
Events such as wars, epidemics and natural disasters that threaten lives and livelihoods of people frequently attract major media attention and play a major role in shaping community responses. Recognizing the importance of the media, the Sierra Leonean government developed a National Communication Strategy for Ebola Response in 2014. They adopted a multimedia approach, using a mix of channels and materials to reach key audiences. These included radio broadcasts, television shows, posters, newspapers etc. Whether or not the health communication messages influenced people’s willingness or otherwise to access health services during the epidemic has not been analyzed. This paper presents data on whether and how media influenced the actions of communities responding to the Ebola epidemic.

Methods:
Mixed ethnographic research methods were adopted including: in-depth interviews with diverse actors involved in the Ebola response (national policy makers, media practitioners, and MoHS staff); participant observation fieldwork; FGDs in two villages in Moyamba and Bo districts.

Results:
Training of journalists in health reporting did not occur; this led to inaccuracies and lack of sensitization in the early stages of response. Early standardized health communication messages exaggerated the risk of death, generated panic and undermined public trust in the biomedical care being provided at Ebola Treatment Units across the country. In rural areas particularly, trust in community members was paramount and media was most effective when it worked through community radio channels with messages in local languages and participation from local leaders. Paramount chiefs, health workers, religious leaders and survivors spoke on radio to demystify treatment, dispel rumors and corrected misinterpretations of health posters.

Findings show a number of factors are important for communications to be effective: demographic characteristics of the messenger, geo-socio-political features, local beliefs and the nature and role of community stakeholders.

Discussions/conclusions:
Media plays a pivotal role in coordinating responses from national to community levels, encouraging local participation and providing a platform for service providers and community accountability. Our findings suggest that relying on standardized messages and protocols, developed at national level, may not be helpful. Communicating at a local level is critical since it allows for accommodation of local idioms of contagion and local ideas about aetiology.

Communicating health messages through the media is a necessary but not a sufficient condition that people understand and adhere to health messages – local adaptation and use of community radio channels in local languages with locally influential key informants is critical.
How much does community-based targeting of indigents in the health sector cost? Novel evidence from Burkina Faso

Background

Targeting efforts aimed at increasing access to care for the very poor by reducing to a minimum or completely eliminating payments at point of use are increasingly being adopted across low and middle income countries, within the framework of Universal Health Coverage policies. No evidence, however, is available on the real cost of designing and implementing these efforts. Our study aimed to fill this gap in knowledge through the systematic assessment of both the financial and the economic costs associated with designing and implementing a pro-poor community-based targeting program across 8 districts in rural Burkina Faso.

Methods

We conducted a partial retrospective economic evaluation (i.e. estimating costs, but not benefits) associated with the abovementioned targeting program. We adopted a health system perspective including all costs incurred by the government and its development partners as well as costs incurred by the community to work as volunteers on behalf of government structures. To trace both financial and economic costs, we combined Activity-Based Costing with Resource Consumption Accounting. To this purpose, we consulted and extracted information from all relevant design/implementation documents and conducted additional key informant structured interviews to assess the resource consumption that was not valued in the documents.

Results

For the entire community-based targeting intervention, we estimated a financial cost of USD 587,511.02 and an economic cost of USD 1,213,446.35. The difference was driven primarily by the value of the time contributed by the community. Communities carried the main economic burden. With a total of 102,609 indigents identified, the financial cost and the economic cost per indigent identified were respectively USD 5.73 and USD 11.83.

Conclusion

The study is first in its kind in accurately tracing financial and economic costs of a pro-poor targeting program. The financial costs of USD 5.73 per identified indigent represents 21 percent of the per capita government expenditure on health.
OLAWALE OLADIMEJI, HEALTH SYSTEM AND POLICY ANALYSIS NETWORK
Poster Number: 307

Landscape analysis of the engagement of the Private Sector in achieving Universal Health Coverage in Nigeria and policy implications

Co-authors: OLAWALE OLADIMEJI-HEALTH SYSTEM AND POLICY ANALYSIS NETWORK

Global efforts in health over the last decade have been towards achieving universal coverage for all populations. Quality health service and financial protection are vital component in the implementation of UHC in any country, though its specific framework differs depending on the context of the country. Public sector involvement in the achievement of this cannot be over emphasized but the role of the Private Health sector in achieving UHC in developing countries has rarely been well understood. This is because in most low-income and middle-income countries (LMICs) which include Nigeria, the sector is generally large, poorly documented, and very heterogeneous, and extremely profit oriented. This study used the landscape analysis approach which examines an existing system and the multiple factors of the system which can indicate preparedness of the system for an intervention. This landscape analysis is aimed at exploring the existing structure of Private sector in healthcare in Nigeria and how the structure shapes the sector’s engagement in the achievement of UHC in Nigeria. It explored the various groups that make the Private Health sector in Nigeria, their characteristics and how these characters shape their involvement in the progress towards universal health coverage in Nigeria. Furthermore, it used a framework to link systemic factors in Nigeria with the Private health sector and UHC in Nigeria. Finally, it recommends a policy strategy and feasibility on how the Private Health sector can be integrated into the health system to harness its benefits for the progress towards UHC in Nigeria.
Ashina Mtsumi, Global Initiative for Economic, Social and Cultural Rights (GI-ESCR)  
Poster Number: 308

The role and limitation of private actors in the realisation of SDG 3 and the right to health

Co-authors: Ashina Mtsumi-Global Initiative for Economic, Social and Cultural Rights (GI-ESCR); Allana Kembabazi-Initiative for Social and Economic Rights (ISER); Jessica Hamer-Oxfam GB; Judith de Mesquita-University of Essex; Marianne Buffat-School of Law and Human Rights Centre, University of Essex; Sweekruthi Keshavamurthy -School of Law and Human Rights Centre, University of Essex; Daniela Travaglia-School of Law and Human Rights Centre, University of Essex; Lisa Kadel-School of Law and Human Rights Centre, University of Essex

Research has shown that the growth of private actors in the delivery of essential social services, including healthcare, risks undermining States’ obligations to realise economic, social and cultural rights. Privatisation in essential social services, if not adequately monitored, regulated, and controlled, could lead to violations of these rights, particularly for those too poor to pay for or without the capacity to choose adequate services. In an increasingly complex and globalised world where the role of private actors is growing, there is a need to reflect on and develop common principles regarding how States and private actors interact, as well as their limitations, to ensure the full realisation of human rights and Agenda 2030.

Human rights bodies including the UN Committee on Economic, Social and Cultural Rights and the UN Special Rapporteur on the right to health have occasionally addressed the issue, calling on States to conduct assessments prior to privatisation and to review privatised health systems. However, there has been a lack of guidance for States on the human rights parameters to take into account prior to the decision of involving private actors in health care, and how to assess, implement, and safeguard the right to health where there has been privatisation in health systems.

In an effort to develop an in depth understanding of the human rights framework applicable to the involvement of private actors in health care, and States’ obligations where private actors are involved in the health sector, this paper proposes a preliminary human rights framework to reflect on the issue. It builds on empirical data regarding development assistance for private health providers, and on empirical evidence analysing private sector involvement in health governance in Uganda, as well as on research on the existing human rights framework. In it then lays the foundations for developing a human rights framework to enable governments and civil society to assess when privatisation poses a risk to the realisation of the right to health as envisioned in international human rights law and captured most recently in the Sustainable Development Goal 3.
Vikash Keshri, Centre for Health Policy, Asian Development Research Institute
Poster Number: 309

Learning by Example: Motivating the Government to Reinforce Regulation of Private Health Sector in Resource Constrained Bihar Province of India

Co-authors: Vikash Ranjan Keshri - Centre for Health Policy, Asian Development Research Institute

Purpose:
Bihar is one of the resource constrained state in India. Health systems in Bihar is mixed and complex. Majority of people access health care from private sector, even when the cost is much higher. State government is trying to regulate private sector by bringing policies aimed mainly at administrative control and barely at market harnessing methods. First regulatory policy was enacted in year 2010 but couldn’t be implemented. Later, state government adopted the central act “The Clinical Establishment Act (CEA) in year 2013. No private health facility could be registered, hence they continued to be unregulated. We adopted case study approach to understand successful regulatory framework and make recommendations for Government of Bihar.

Focus/Contents:
Constitutional provisions in India mandates improvement in public health, nutritional status and right to life for all citizen as responsibility of government. Health issue is under the jurisdiction of state government. Due to unregulated proliferation of mixed health systems, high inequity in access and low quality of care is most important challenge. Many factors contribute to this challenge, these are; limited role of government as steward, insufficient institutional arrangements, lack of motivation, dominant role of doctors and professional associations in overall political economy. All other countries, where regulation is successful have robust institutions, which is decentralized. All other states of India, where regulation is successful used innovative approaches and harnessed technology to advance the implementation of legislations.

Based on this review, we recommended the possible approach towards larger stewardship role of government in Bihar. The approach can be: a). Government must continue to focus on strengthening public health systems and b). Government must start regulating private sector. Identified next steps were: Policy analysis of CEA, mapping of private sector in health care, engaging the stakeholders, and policy mapping to explore options to constructively engage private sector.

Significance for sub-theme area /field building dimensions:
We adopted this unique strategy for motivating and developing capacity of local government for ensuring effective regulation. Co-planning with state level policy makers was done by organizing consultative workshop to identify steps for future research and policy directions. Co-designing of research focus with policy makers turned out to be suitable health policy and systems research approach for complex issues.

Target audience:
Target audience for this study was department of health in state of Bihar. Approach to motivate and build stewardship capacity can be replicated in other similar setting.
Matt Griffith, Banyan Global  
Poster Number: 310  

Revitalizing Private Maternity Homes in Underserved Areas of Ghana

Co-authors: Matt Griffith - Banyan Global

Context: Private maternity homes (PMHs) are important providers of maternal, newborn and child health (MNCH) services in rural and underserved areas of Ghana. These areas are often far from public sector health facilities, or even other private clinics or health centers. However, the PMH sector has experienced a steady decline over the past decade, with many PMHs closing or reducing services as the ageing midwives who own and operate these facilities have retired or passed away. The USAID-funded Saving Maternity Homes (SMH) project piloted ownership and management “transformations” as a novel approach to developing capacity and revitalizing PMHs. The project strengthened PMH capacity in business continuity planning and clinical service provision; facilitated transformations involving PMHs acquiring new owners, managers, or skilled personnel to address human resources for health (HRH) challenges; and conducted operations research to understand the effectiveness of the project design.

Methods: The project conducted an extensive baseline assessment (118 facilities) and endline assessment (99 facilities), supported by a literature review and key informant interviews. Additionally, the endline assessment included 77 non-transformed facilities and 22 transformed facilities, enabling comparison between tiers of project assistance.

Results: At endline, 88% of surveyed PMHs, including 87% of non-transformed and 95% of transformed PMHs, demonstrated improved financial sustainability, an important consideration for private providers that sustain without the benefit of public funds. Ninety-two percent, including 90% of non-transformed and 100% of transformed facilities, posted improved quality of clinical services, ensuring that quality care is provided even in remote facilities for which oversight from regulators is challenging. Non-transformed facilities experienced a 21% increase in MNCH visits compared to baseline, while transformed facilities experienced a 50% increase. Additionally, 10 of the 22 transformed facilities are in the process of legally transitioning from a PMH to a full health clinic, which will strengthen their ability to participate in national health insurance and other important aspects of the broader health system.

Conclusion: These results suggest that the combination of business strengthening, clinical strengthening, and facilitation of ownership/management transformations is an effective strategy for supporting private maternity homes in underserved areas. The improvements observed reduce PMH reliance on the primary owner/midwife, support the continuity of the facility, and increase the likelihood that communities retain access to MNCH services.
**Everyday resilience among mission hospitals in India: an interdisciplinary, mixed method study**

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Background: Over 60% of inpatient care and 70% of outpatient care is provided by the private sector in India. Within the “private sector” are multiple actors, including for-profit, charitable, and traditional health providers. Among charitable health providers, a large proportion are mission hospitals. India relies heavily on both for-profit and charitable providers to address the country’s health needs, however, charitable health providers, including mission hospitals, face a series of challenges that place pressure on their survival and make sustained contribution somewhat precarious. Using the theory of “everyday resilience”, this study explores how sudden changes and chronic challenges (“shocks and stresses”) impact mission hospitals in India and the range of responses employed between 2010 - 2017.

Methods: We used interdisciplinary, mixed methodology to assess the responses of mission hospitals to shock and stress, examining how they respond to challenges, their use of hardware (e.g. finances, infrastructure) and software (e.g. values, leadership skill), and the underlying capabilities that enable response. We collected data through observation, organizational material, comprehensive literature review and key informant interviews (n = 81) at 11 mission hospitals across India. Interviews were thematically analyzed using NVivo and triangulated with other study data.

Results and Discussion: Mission hospitals are impacted by changes taking place within the macro health system and the meso (mission hospital) health system. Most challenges operate as “chronic stressors”, for example, strained governance structures, changing funding streams, and human resource shortages. “Shocks” include major changes in government health policy and rapid rise of for-profit healthcare in semi-urban and rural areas. In response to these challenges, some mission hospitals exhibit traits of everyday resilience as complex adaptive systems, traversing between absorptive, adaptive, and transformative strategies, relying heavily on “software” such as values, networks, leadership skills, and a sense of vocational duty to continue delivering quality healthcare despite challenging circumstances. Among mission hospitals that appear to be successfully navigating challenges, three core capacities were present: 1) cognitive capacity, having awareness and understanding of the challenge, and developing appropriate response strategies; 2) behavioral capacity, having agency to deploy context-specific response; and 3) contextual capacity, having adequate resources, including hardware and, importantly, software, to exercise the first two capacities.

Conclusion: Understanding the scope and etiology of everyday resilience among mission hospitals will help the larger network of charitable health providers in India foster capabilities that enable everyday resilience, continued delivery of quality healthcare, and meaningful contribution to India’s larger health goals.
Family planning program sustainability – a modeling exercise on financial and health impact of private sector growth through improved targeting of donor and public funds

Co-authors: Sayaka Koseki-Palladium; Kate Klein-Palladium; Christopher Brady-Palladium; Robert Kigula-Uganda Health Marketing Group; Moses Muwonge-SAMASHA Medical Foundation, Uganda; Deepak Bajracharya-Independent consultant, Nepal

Background: With plateauing donor funding and limited government resources to fill the gap, the private sector is often seen as a potential source of funding and mechanism to achieve more efficient provision of health services. However, many countries struggle to adequately account for and envision the commercial sector’s role in achieving a more sustainable health market. Often, the private sector provides a significant proportion of health services at the risk of high out-of-pocket expenditure. Concurrently, public sector/subsidized services cannot be provided for all in an equitable manner given available resources, often inadvertently meriting the urban/rich, while failing the rural/poor.

Methods: The USAID-funded Health Policy Plus project developed an Excel-based projection model to estimate the financial and health equity impact if the private commercial sector for family planning grows in wealthier markets in Uganda, using data from the 2011 Demographic and Health Survey. Because the DHS does not indicate whether family planning products are free, social marketed, or commercial, product segmentation is not possible on its own. Thus, we calibrated the assumptions in consultation with in-country stakeholders to determine the proportion of family planning products/services currently offered through the various outlets and proportion of wealthier women currently accessing services who would acquire it through a commercial source over the projection period (2017-2020).

Results: In 2011, 48% of women in union using any modern method of contraception accessed family planning through a commercial source (private clinic, hospitals, pharmacies, and drug shops). While implants available through these outlets were commercial products, 80–100% of the remaining modern methods (oral contraceptive, intrauterine device, injectable, and condoms) were subsidized socially marketed products. If commercial products are more readily available, 50,469 more women could be served by the commercial sector, saving US$221,000 in subsidies. An additional 7,000 poor, rural women could be reached if those savings are reinvested in pro-poor family planning outreach programs.

Discussion/Conclusion: Donors have traditionally solely tracked the number of women reached, which incentivized donor program growth in urban markets. Sustainability and equity are hard to balance, as equitable coverage often requires additional resources. This model shows in quantitative terms that better targeting of government and donor resources through pro-poor programs and policy actions such as reduced tariffs and better regulation to maximize private sector growth can improve equity and sustainability in the long term.
Assessing the potential for the private sector to provide services to disadvantaged urban populations: Results of willingness-to-pay studies in India, Pakistan and Bangladesh

Background

The private sector is already playing an important role in delivering healthcare in urban areas in low- and middle-income countries (LMICs). But the questions are often raised to what extent these services can be accessed by the poorest sections of the population. With an increased global focus on Universal Health Coverage and prioritising the needs of those furthest behind, there is an imperative to develop effective public-private partnerships, which integrate pro-poor approaches and make essential quality services available for all. The aim of this research was to elicit willingness-to-pay (WTP) to set up appropriate pricing structures and cross-subsidy mechanisms to facilitate the involvement of the private sector in provision of basic eye care to slum-dwellers in three cities in South Asia: Dhaka, Bangladesh; Jaipur, India; and Lahore Pakistan.

Methods

We conducted population-based surveys of adults aged 15+ years in selected slums in each city and collected data on respondent characteristics and WTP for spectacles using a contingent valuation approach. The sample size varied from 725 respondents in Jaipur to 1560 in Dhaka. Refractive error was simulated using ready-made spectacles with different powers. The WTP elicitation adopted a triple-bounded dichotomous choice format, using a sequence of yes/no questions to narrow down respondents' WTP. Different bid starting values were used to control for starting point bias and proposed bids were increased or decreased depending on the answer given. Multivariate analysis was conducted to explore individual characteristics associated with WTP. Reliability and internal validity of the WTP estimates was assessed following the method described by Foreit & Foreit (2002).

Findings

The mean price respondents were willing to pay for a pair of spectacle was equivalent to 7.8 USD in Dhaka, 9.5 USD in Jaipur and 6.3 USD in Lahore. WTP and demand for services varied by individual characteristics with male, those with higher levels of education and higher household incomes demonstrating a higher WTP. The demand curves showed the price elasticity of demand for different population sub-groups and suggested the segments of the population that will require certain levels of cross-subsidy.

Discussion/Conclusion

There is a potential for market-based approaches and private providers’ involvement in eye care targeting disadvantaged population groups, such as slum-dwellers. Contingent valuation method can be successfully used to help private providers to set up appropriate prices and cross-subsidy mechanisms to achieve sustainable and equitable delivery of services and to reduce the burden of visual impairment in LMICs.
Poster Abstracts

Pauline Bakibinga, APHRC
Poster Number: 314

The role of public-private partnerships in improving maternal, newborn and child health services for the urban poor: final results from a quasi-experimental study

Co-authors: Pauline Bakibinga-APHRC

Background:

Slum residents in Nairobi, Kenya exhibit poor health indicators including high levels of maternal, neonatal and under-five mortality. Health care delivery in this setting is largely the domain of a thriving but largely unregulated private health sector. We implemented a 3 year project in Viwandani and Korogocho slums with the aim of strengthening public-private partnerships for the improvement of health care services and outcomes for mothers, neonates and young children through various strategies: infrastructure upgrade of selected health facilities, capacity building of health workers and managers, and strengthening community referral systems. We assessed the effect of the intervention.

Methods:

A mixed methods intervention study, with pre and post-assessments, to assess the impact on quality of health services, utilization and population health outcomes. Baseline and end line data were collected in 2013 and early 2016, respectively. Data are from surveys of 1698 women aged 12-49 years and 1963 caregivers of children under five years, and qualitative interviews; focus group discussions) with a subset of the women and community health volunteers (CHVs) and in-depth interviews with providers and health managers.

Results

There were increments in various population level outcomes. Proportions of newborns initiating breastfeeding within 1 hour of birth, children with full vaccination, children receiving Measles vaccination, sick children <5 years who seek care at a health facility, women using contraceptives and women attending at least 3 PNC visits increased from 33.3, 28.8, 46.6, 34.9, 47.2 and 22.1% at baseline to 81.8, 42.4, 49.3, 45.0, 70.8 and 59.4% at end line, respectively. The assessment showed better functionality of upgraded health care facilities in terms of variety and quality of services, and recognition by regulatory authorities, stronger relationships between the public and private sector facilities with the private health facilities benefitting more from in-service trainings and access to public supplied health commodities. The private health providers did not continue with some components of the project. It was also discovered that the community members expected free health services from the upgraded health facilities.

Conclusions

Findings highlight the potential for both public and private sectors to complement each other in health service delivery for under-served populations. Persisting needs include strengthening health providers' leadership skills; increasing enrollment of the target communities into existing medical insurance schemes so that the accredited health facilities can have a wider pool of clients whose costs can be recovered from the insurance schemes. in order to promote financial sustainability.
Analysing formulation and performance of Public Private Partnerships in health: Evidence from four case studies in India


Background
In India, central and state governments have entered into Public Private Partnerships (PPPs) for healthcare. Current evidence points to their mixed performance. The objective of this formative research was to study the formulation, implementation and performance of specific PPPs. Four PPPs in three states were studied – Outsourcing of (1) Radiology services in Bihar; (2) Human Resource and (3) Rural Mobile Medical Units (MMU) in Chhattisgarh and (4) Hemodialysis services in Delhi.

Methods
The study was qualitative, using the multiple case study method. Data was collected through 28 individual and four group interviews with health officials and staff and 36 individual and nine group interviews with community. Programme data, media reports and grey literature were reviewed. The cases were first analysed individually and then together, on emerging themes. Public Health Resource Society Institutional Ethics Committee gave Ethical Clearance. Informed consent was taken verbally. Names of respondents, and some designations are kept confidential.

Findings
In Bihar, outsourcing of Radiology services (X-ray and ultrasound) was implemented across 38 districts during 2006-2007 and is still ongoing. Delhi empanelled a private agency to develop haemodialysis centres in PPP mode in 2013 and as of March 2016, this was operating in three hospitals. Chhattisgarh government outsourced recruitment of doctors and nurses to private agencies in 2014 as a strategy to address health staff shortages in rural and remote areas. It led to the recruitment of 784 nurses and 13 doctors. However, it was stopped after a few months. In the same state, rural MMUs to provide primary healthcare were started in tribal and conflict affected districts through PPP mode in 2012. Thirty MMUs were started in 14 districts but closed down in 2014 due to programmatic and management issues.

In all four cases, the primary rationale for outsourcing was the non-availability of services or human resource. The PPPs filled a gap in health system functioning and in some cases provided services that were absent till then. However, the case studies show that the long-term implications and sustainability of PPPs need more serious assessment.

Discussion and Conclusion
The four case studies demonstrate certain commonalities and pathways and have contributed to an emerging theory on the genesis of PPPs, their performance and their impact on the public health system, using the health systems approach. Further research is needed on PPPs in India and on the differing experience with for-profit & not-for-profit private sectors.

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Introduction: A retrospective case study of government resource contributions (GRCs) to private-not-for-profit (PNFP) providers was done with a focus on the largest nonprofit provider network - the Uganda Catholic Medical Bureau (UCMB). The framework of complex adaptive systems was used to explain changes in the resource contribution and the relationship between the Government and UCMB from 1997 to 2015.

Methods: In-depth interviews with the main actors on both sides provided the qualitative data. The trends for GRCs and service outputs were constructed from existing database used to monitor service inputs and outputs for the study period. Study findings were validated at meeting with a broad set of stakeholders.

Results: The GRCs and the relationship were characterized by three major phases - 1) Initiation phase, 2) Phase of rapid increase in GRCs, and 3) Declining GRC phase. The main factors responsible for the dynamic relationships were 1) Financial deficits at PNFP facilities, 2) advocacy by PNFP network leaders, 3) changes in government resource envelope, 4) variations in the "good will" of government actors and 5) changes in donor aid modals. Complex coping strategies revolved around changes in user-fees, operational costs of PNFPs and government expectations from UCMB. Quantitative findings showed a progressive increase in the service outputs despite the declining value of GRCs for the study period.

Conclusions: The GRCs form a complex interaction between government and PNFPs. The agenda for UHC should pay attention to the factors that interact in complex ways to shape how government work together with PNFPs to advance UHC. GRCs could be leveraged to mitigate the financial burden to communities served by PNFPs. Governments planning to advance UHC goals should explore policies to expand GRCs to subsidize the operational costs of NSP. Embedded research will be needed to support the complex adjustments need to solve emerging problems.
What’s happening in the evolving private healthcare sector in India? Understanding its characteristics and implications, while moving towards universal healthcare

Co-authors: shweta marathe-SATHI

Background: Healthcare is now viewed as “a big business opportunity” with high growth potential in many LMICs including India, backed up by favorable policy environment. Transformations in private healthcare sector have created different opportunities as well as challenges related to medical practice, healthcare delivery, affordability of care, and regulation. For achieving Universal Health Coverage, engagement with private sector is considered in a major way. This necessitates enhancing the understanding regarding characteristics and practices, associated opportunities and risks in the private healthcare sector, however very little has been researched on unpacking this. Recognizing this knowledge gap, a study is being conducted on practices, regulation and accountability in the evolving private healthcare sector in Maharashtra State, India.

Methods: The mixed method study is being conducted in the cities of Mumbai and Pune. Data collection methods include qualitative interviews (QIs) with purposively selected medical doctors, hospitals administrators from different settings and patient advocacy groups, narrative literature review, mapping of private healthcare facilities, stakeholder consultation and innovative tool of witness seminar. 40 QIs have been completed and its thematic analysis using NVivo software will be completed by June 2018.

Results: Key findings related to following themes emerging from QIs will be presented: a. Distinctive changes in private healthcare in terms of its composition, trend in opening up big hospitals, take-over of hospitals, declining trend of solo practitioners b. Characteristics of private healthcare establishments in terms of forms of for-profit settings, their ownership, nature of investment, structure of operating c. Nature of employment for doctors and management professionals, related policies, new models, performance targets to doctors d. Market effect on clinical, institutional practices- services provided, employing higher technology, accreditations, unindicated medical interventions, nexus between insurance and healthcare providers, increasing competition and commercialization e. Implications of changes in private healthcare on setting up or sustaining different types of healthcare facilities, cost of care, e. concerns of doctors, hospital administrators from different private healthcare facilities regarding existing regulatory mechanisms and idea of regulating private sector.

Conclusion: The findings from this empirical study will contribute to understanding of the evolving private healthcare sector and the implications of the changes, shed light on associated challenges at various levels, highlighting need for effective approaches for regulation, and provide lessons for other LMICs. These would be important for enabling more effective participation of private healthcare sector while developing roadmap for universal healthcare.
Poster Abstracts

Peta Leemen, The Fred Hollows Foundation
Poster Number: 318

Mobilising government support for universal eye health: catalytic role of non-profit organisations in establishing sustainable capacities for comprehensive eye care in Pakistan’s public health system

Co-authors: Haroon Awan-Avicenna Consulting Associates; Peta Leemen-The Fred Hollows Foundation; Farooq Awan-The Fred Hollows Foundation

Background: With 285 million people visually impaired worldwide, 80% from preventable causes, universal eye health is an important objective for many countries. Relative to peers, Pakistan stands out as having made significant gains in expanding and strengthening eye health services, increasing Cataract Surgical Coverage to over 77% (2006), and achieving a Cataract Surgical Rate of over 2,800 (2014), with a high rate of good surgical outcomes. Development of eye health services in Pakistan was supported by a number of international non-profit organisations who acted as force multipliers. Their role in engaging with the public health system to support establishment and quality improvement of eye care within government health services is worth examining.

Methods: The Fred Hollows Foundation commissioned an evaluation of its Pakistan programming (1998 to 2015) to investigate the impact of interventions to establish and improve eye health services. The evaluation tested a theory of change about how a not-for-profit organisation, in coordination with other NGOs and government partners, contributed over time to building eye health capability that has been sustained within Pakistan’s health system. The study involved semi-structured interviews with 25 key informants, on-site visits, a review of project records and secondary literature, and an analysis of eye health service data from partner organisations.

Results: The evaluation found several key ways that not-for-profit agencies in Pakistan, including The Fred Hollows Foundation, contributed to strengthening eye care within the Pakistan health system. Their contributions included: generating evidence on the burden of eye disease, developing human resources for eye health, piloting interventions within the public health system, developing a model of district service delivery that could be ‘taken to scale’ across the country, supporting coordinated rollout of the model in over half the districts in Pakistan, and generating evidence of the model’s effect that was shared with stakeholders at different levels. The coordinated approach taken by the NGOs, in combination with strong leadership from the National Committee for Eye Health, galvanised high-level political support for eye health. This is evidenced by the National Government’s commitment of funds to roll out the district eye health model to all districts in the country in 2005-2012.

Conclusions: This study highlights learning from effective engagement with government by non-profit organisations acting as ‘change agents’ rather than service providers. It demonstrates how strengthening of existing health systems and governance and planning processes can achieve sustained improvements to access, coverage and quality of public health services.
Regulation by Competition and Health-Seeking Behaviour for Women’s and Children’s Health Among Informal Providers in Urban Bangladesh

From a market perspective, patients are considered active consumers who exercise choice over different types of healthcare providers. They do not routinely seek care at the closest or lowest cost provider, instead they seek the highest quality care they can reach and afford, especially when they expect such care will have important impact on health outcomes. This insight can be used to disentangle complex relationships between public and private sectors’ healthcare provision, and strategically used to regulate the low-quality private sector, especially those operating outside regulatory frameworks (i.e., informal providers). Insufficient training and qualification of informal providers is problematic since it can lead to substantial risk and cost from inappropriate and harmful medical care. If people are good judges of quality of care, strengthening the public and formal subsidized sector will reduce the demand for informal care. However, if they are not good judges, that relationship might not hold.

Informal providers are significant players in urban Bangladesh, where healthcare provision is not incorporated in the health system. Instead, it is the responsibility of local government which contracted the majority of primary-care services to non-government organizations, creating a significant variability in public sector care. Consequently, there is a growing reliance of the urban poor on informal care including drug sellers, traditional healers and traditional birth attendants.

Using georeferenced data from Bangladesh Demographic and Health Survey (BDHS) and Health Facility Survey (BHFS) 2014, the current research attempts to understand health-seeking behavior for women’s and children’s health in urban Bangladesh from a market perspective. A set of quality indicators is selected from BHFS 2014 to construct a quality index that reflects users’ perceived quality based on the results of a previous Discrete Choice Experiment study to understand users’ preferences for maternal and child health in urban Bangladesh, which is subsequently used to categorize health facilities by quality level. The pattern of health-seeking behavior, including the use of informal providers for a range of women’s and children’s health services, is examined using BDHS 2014. Spatial analysis is then employed to model the spatial coverage and patient flow in urban areas, to investigate the relationship between quality and choice of provider. This study seeks to test the hypothesis that demand for informal care is inversely related to the quality of public sector and formal subsidized care.

Multiple levels of influences affecting the utilisation of adult asthma services in the private sector in Khartoum

Co-authors: Rachael Thomson-LSTM; Magde Noor-EPILAB Khartoum; Asma El Sony-EPILAB Khartoum

Background

Asthma is the fourth cause of hospital visits in Sudan and globally affects more than 300 million people (WHO, 2007) (IUATLD, 2011). Most asthma patients in Sudan seek asthma care in hospital emergency rooms or in the private sector. Sudan has a pluralistic health care system with a strong and varied private sector.

Objective

The goal of this thesis was to use a patient-centred approach to understand the utilisation of adult asthma services in the private sector in Khartoum.

Design

The research design was constructed using an explanatory sequential mixed method Social Ecological approach (Creswell, 2013). The quantitative research was conducted using a health facility survey of private hospitals, private chest clinics, and pharmacies, in order to describe the asthma services available. This was followed by qualitative research using in-depth interviews with asthma patients who use the private sector, to explore decision-making around facility use and asthma health care seeking behaviour in more detail.

Findings

Low rates of spirometers and peak flow meters were available in private hospitals (28% and 33%, respectively). There was very little asthma-specific training for providers, and little use of asthma treatment cards and registers. However, the quality of care in the private sector was viewed as better than in the public sector, with shorter waiting times and better hygiene levels. Patients sought frequent, short-term care at private facilities for acute attacks (predominately in hospital emergency rooms) rather than long-term management of their condition. The severity of the disease and the major impact it had, particularly young adults’ lives, was striking. Stigma and misconceptions of the disease by the community was felt strongly by young women and altered how they sought care and how they interacted with people in the community.

Conclusion

A Social Ecological approach was used to examine the influencing factors of asthma service utilisation in the private sector by considering the five nested, hierarchical levels: individual, familial/interpersonal, community, organisational, and policy/enabling environment. This enabled a comprehensive understanding of the barriers and enablers of effective care. Encouraging stakeholders across the different levels of influence to implement standard case management has the potential to lead to a reduction in emergency room admissions, less severe attacks, a reduction in stigma and less fear and concern for the patients.
Jose Gutierrez, Abt/PHSP
Poster Number: 321

Policy gap analysis for private health sector in Ethiopia: Qualitative assessment of opportunities and challenges

Co-authors: Jose Gutierrez - Abt/PHSP; Mesfin Eshetu Abebe - Abt/PHSP

Abstract

Background: As in other low income countries, private health facilities are large and growing in Ethiopia, particularly in urban centers. They comprised more than one-third of all facilities in the country and are too large to ignore.

The objective of this assessment is to analyze the existing national health polices and laws on the private sector in order to suggest revisions to create a more enabling environment.

Methods: The assessment reviewed all relevant literature and documents including policies, regulations, directives, strategies, guidelines, health and demographic studies in Ethiopia and other countries that will contribute to the creation of a better enabling environment. A participatory approach, involving key informants interviews from public/government and private sectors and partners was employed and thematic analysis guides used for analysis.

Results: The document review shows recognition of the private sector not only in formal policy and strategy documents but also in government mass media. All government policy and strategy documents since the advent of the Ethiopian Peoples' Revolutionary Democratic Front (EPRDF) have given attention to the private sector. For example, “promotion of the participation of the private sector and nongovernmental organizations in health care” was among the major percepts of the Health Policy (TGE 1993).

Key informants revealed that all policymakers and public sector respondents believed that the current policy created an enabling environment as it encourages service provision by and establishes clear standards and stipulates major roles for the private sector. On the other hands private sector key informants are more inclined to think that the environment is not enabling to the private sector, with most comments related to standards not adapted to the realities of the country and policy/regulation instruments that do not address the human resource, land and financing concerns of the private sector.

Conclusion: The private health sector contributes a lot in the provision of major public health services in the country. Existing polices and laws are supportive of and create an enabling environment for private practices. Continuous dialog among different stakeholders, advocacy and participations of the private facilities with their associations will further strengthen the public –private partnership and improve the country’s health delivery system.
Poster Abstracts

Willem Odendaal, South African Medical Research Council, Department of Psychiatry, Stellenbosch University
Poster Number: 322

**Contracting out to improve the use of clinical health services and health outcomes in low- and middle-income countries**

Co-authors: Willem Odendaal-South African Medical Research Council, Department of Psychiatry, Stellenbosch University; Kim Ward-School of Pharmacy, University of the Western Cape, Cape Town, South Africa; Jesse Uneke-Knowledge Translation Platform, Health Policy and Systems Research Project, Ebonyi State \ University, Abakaliki, Nigeria; Henry Uro-Chukwu-Social Mobilization and Diseases Control, National Obstetrics Fistula Centre, Abakaliki, Nigeria; Dereck Chitama-School of Public Health and Social Sciences, Muhimbili University of Health and Allied Science, Dar es Salaam, Tanzania; Yusentha Balakrishna-Biostatistics Unit, South African Medical Research Council, Durban, South Africa; Tamara Kredo-Cochrane South Africa, South African Medical Research Council, Cape Town, South Africa

**Background**

Contracting out governmental health services is a financing strategy that governs the way in which public sector funds are used to have services delivered by non-governmental health service providers (providers), on behalf of the government. It entails a contract between government and provider, detailing the mechanisms and conditions on which the latter are to provide these services.

**Objective**

To assess the effect of contracting out on: (i) utilisation of health services; (ii) improvement of population health outcomes, equity in utilisation of services, and health systems performance; and (iii) costs and cost-effectiveness service delivery.

**Methods**

Two authors independently screened all records, extracted data from the included studies and assessed the risk of bias. We calculated the net effect as the intervention effect after adjustment for the control effect. It is expressed as percentage points, with a positive percentage point value favouring the intervention, and a negative value favouring the control. We used GRADE to assess the certainty of evidence.

**Results**

We included 2 full texts from screening 11,155 titles/abstracts and 214 full texts. Both studies reported that contracting out probably makes little or no difference to (i) immunisation uptake of children 12 - 24 months old (moderate certainty evidence), (ii) the number of women who had ≥2 antenatal care visits (moderate certainty evidence), and (iii) female use of contraceptives (moderate certainty evidence). One study found contracting out may make little or no difference to the mortality of children younger than 1 year old (net effect = -4.3 pp, intervention effect p = 0.36, clustered SE = 0.03, 95% CI -0.102 to 0.016; low certainty evidence), and the incidence of childhood diarrhoea (net effect = -16.2 pp, p = 0.07, clustered SE = 0.19, 95% CI -0.624 to 0.120; low certainty evidence). One study found that contracting out probably reduces individual out-of-pocket spending on curative care (net effect = $ -19.25 (2003 USD), p = 0.01, 95% CI -35.93 to -15.855; moderate certainty evidence). Equity in the use of clinical health services was not reported.

**Conclusions**

Contracting out may be no better or worse than government-provided services, but additional rigorously designed studies may change this result. There are many examples of contracting out programmes, which imply that it is a feasible response when governments fail to provide good clinical healthcare. Future contracting out programmes should be framed within a rigorous study design to allow valid and reliable measures of its effects.
Overcoming barriers to public-private partnerships for women’s health: Mechanisms to engage with and strategically purchase from the private sector in Cambodia, Nigeria, Tanzania, and Uganda

Co-authors: John Campbell, Nathan Blanchet, Adeel Ishtiaq, Neetu Hariharan, Pierre Moon

As countries strive for universal health coverage, governments are looking for more effective and efficient ways to deliver affordable, quality health services. As such, governments are considering working more closely with the private sector to help fill service delivery gaps and address other system needs through public-private partnerships. Still, challenges persist on both sides. The public sector often relies too heavily on weakly enforced regulations and lacks the knowledge of and commitment to private sector stewardship and strategic purchasing. Conversely, private sector providers often lack the financial and technical capacity to align with government purchasing needs and have limited ability to influence relevant policy and process reforms. To bridge this gap between public purchasers and private providers, Results for Development worked with Population Services International under the USAID-supported program Support for International Family Planning Organizations: Strengthening Networks to implement an innovative approach to test two distinct functions that may be powerful – but partial – solutions to the challenges of stewardship and strategic purchasing to better enable engagement from the private sector perspective.

We will present country experiences from Cambodia, Nigeria, Tanzania, and Uganda that explores these gap and challenges between purchasers and providers, and introduce the roles and functions of market facilitation (neutral parties supporting improved coordination, information exchange, financing, service delivery, and quality functions in PHC delivery to mitigate market failures), and purchaser-provider intermediation (organizations that reduce fragmentation in the health market by mediating interactions and transactions of small-scale providers and addressing many supply-side failures) as potential functional solutions to achieve successful public-private partnerships. For example, in Tanzania and Uganda, we have laid down the groundwork for government purchasing from private for-profit providers by landscaping opportunities for contracting with PHC-providing social franchises, facilitating dialogue between government funders and private providers, and developing agreements to begin exchange of resources – showing how market facilitation can create the right enabling environment. Similarly, in Cambodia and Nigeria, we showed how social franchises can evolve as intermediaries to enable governments to strategically purchase high quality, privately provided PHC services. Our work ultimately displays how these roles 1) enable strategic purchasing by governments; 2) create entryways for private sector stakeholders to participate in key health system reforms; 3) support national health objectives while continuing to improve access, quality, affordability, and impact of services; and 4) strengthen the broader mixed health system.
Engaging the private sector to standardize quality measurement: A case study in family planning

Co-authors: Nirali Chakraborty - Metrics for Management

As billions of people in low- and middle-income countries seek preventive and curative care through the private sector, health policy makers and health services regulators find themselves in a dilemma. The very existence of robust private sectors indicates that they fill a market gap, providing access to those unable or unwilling to seek care at public facilities. Yet, private providers are disparaged for providing poor quality care, an aspersion which is difficult to defend with evidence due to the sector’s heterogeneity. Systems which are used to define standards of quality and to enforce those standards in public facilities are inconsistently extended to the private sector. For some health services, donor-funded initiatives to improve quality of care result in entirely new quality assurance systems, with unique measurement approaches, and disparate indicators. This lack of standardization for measurement of health service quality in the private sector is ammunition for detractors of private sector engagement and collaboration.

Using family planning (FP) service delivery as a case-study, this presentation will describe four different approaches to defining important quality indicators at the facility or program level. The first approach is unilateral indicator selection, used by international NGOs, providing FP services worldwide through private sector partnerships. For these organizations, financial and human resources for quality assurance systems are incorporated into donor-funded initiatives. The second approach convened an expert working group to create a common denominator of indicators used across international family planning programs, keeping in mind the types of measurement approaches used by those programs so as to not add additional burden. A third, ongoing initiative is proposing a menu of standard quality indicators for family planning, to be used by performance-based financing programs during their verification assessments. It has taken a collective approach, incorporating input from PBF managers, family planning experts and others, with compromise indicators emerging from the varying needs and perspectives of the participants. The fourth, on-going approach is choosing indicators based on their ability to influence FP continuation (an outcome).

Researchers and LMIC program managers will be interested in the details, benefits and challenges of these approaches, each of which can be applied to other health services. Audience insight regarding which approach may have broader applicability across the private sector, or across health service provision broadly, will feature in the discussion. Comparing innovations in quality measurement to traditional ways of working is essential in garnering support and advocates for change.
The case of unqualified nurses in private sector maternity services in India: an unavoidable reality?

Co-authors: Isabelle Lange-London School of Hygiene and Tropical Medicine; Sunita Bhadauria-independent consultant; Sunita Singh-independent researcher; Loveday Penn-Kekana-London School of Hygiene and Tropical Medicine

Background: In India, the private sector is a major provider of antenatal and delivery care. Global and national policy guidelines have moved toward the professionalization of skilled birth attendants, and while the employment of unqualified health workers is not condoned in the country-level discourse, the current reality is that these staff are fundamental to the provision of clinical care. Our objective was to analyse the roles of unqualified staff in private maternal care and understand their experiences and the implications for service provision.

Methodology: We carried out one week participant observation in twelve facilities in Uttar Pradesh and Rajasthan which included interviews with staff, patients and clinic owners and a quality of care assessment. This was followed by ethnographic research over six months in four facilities and policy interviews with ten stakeholders on the national stage.

Results: In all clinics offering delivery care, we observed unqualified individuals performing clinical duties. Directors emphasized that even if their staff had undertaken formal training, any valuable learning was done on-the-job due, in part, to subpar private nursing education, which proliferated without regulation in certain states. Both qualified and unqualified staff felt limited and experienced tensions surrounding the performance of unnecessary medical procedures for profit, extra shifts, and a lack of employment rights. Moreover, our results show that owners’ staffing strategies centred around hiring unqualified labour room staff. The clinics in our sample did not receive any regulatory or monitoring visits from governmental bodies, but were involved in programs belonging to a wave of global actors implementing initiatives to work with the private health care sector in terms of quality of care and service provision standards. These programs operate at the intersections between the realities of clinic owners, professional associations, and central policy debates.

Discussion: An unregulated private sector creates challenging work conditions for both qualified and unqualified health staff. Lack of formal training combined with unregulated facilities can lead to compromised medical care and marginalised staff, placing them in positions where both their and patients’ needs are not met. Efforts to improve quality of care and staff rights should include a revision of the private institution training program market, the development of techniques to work with private providers, and the mobilisation of resources for health workers. In addition, this research demonstrates ethnography’s value in exploring clinic cultures beyond their medical outcomes.
The role of FBOs in moving towards universal health coverage: The example of health professions education in Cameroon

Co-authors: Sibylle Herzig van Wees-School of Oriental and African Studies

Background: A well-trained and equally distributed health workforce is one of the most important requirements in moving towards universal health coverage. Faith-Based Organisations (FBOs) contribute significantly to health professions training in many Sub-Saharan African countries, including Cameroon. This research sought to understand the process and effects of FBO engagement by donors in the context of health system reforms in Cameroon.

Methods: 12 Qualitative interviews and 2 focus group discussions were conducted with FBOs, Ministry of Health and donors to understand how, why and with what effect FBOs have been engaged in the context of health professions education at both undergraduate and post-graduate level.

Results: This research shows that FBOs train up to a third of all health staff in Cameroon. Despite FBOs’ requirements to follow national curricula, the collaboration between government and FBOs that train health workers is very limited. Inspections are irregular and superficial and there is no regular link between government and FBOs. FBOs train their students and staff at their schools and hospitals and staff is usually absorbed into their own organisations. Evidence suggests that some FBOs adapt an own variation of the nationally accredited curriculum to train nurses and midwives and exclude elements they disagree with such as family planning. Moreover, with help of international missionaries and donors, some FBOs have created post graduate training programmes for surgery that are not accredited by the government.

Discussion/conclusion: Donors and governments have increasingly relied on FBOs for the provision of health services and training of staff due to their relative importance to the health system. Yet, there are a lot of challenges that need to be addressed to ensure that health training is well governed, professional standards are met and the quality is consistent throughout the country. The role of donors in supporting independent initiatives that are not accredited by the government is problematic. This research shows that such initiatives foster distrust between government and FBOs and weaken the overall governance of the health system.
Catherine Verde Hashim, Marie Stopes International
Poster Number: 327

Successfully reaching the poor with clinical social franchising of sexual, reproductive, maternal and child health services – the experience of Ghana's BlueStar Healthcare Network

Co-authors: Catherine Verde Hashim-Marie Stopes International; Erik Munroe-Marie Stopes International; Antonia Dingle-Independent Consultant

Introduction

Whilst the private sector is a critical source of healthcare in many low- and middle-income countries, it is marred with evidence of systemic failure. Clinical social franchising is currently considered an appropriate model for improving private healthcare provision. However, typically implemented in urban, wealthier areas, concern abounds regarding the ability of franchising to reach poorer clients. This paper presents evidence from Marie Stopes International (MSI) Ghana's BlueStar social franchise indicating substantial improvements in use of BlueStar amongst the poor, and presents evidence regarding critical factors linked to this change.

Method

The study uses cross-sectional data from MSI Ghana’s client exit interview (CEI) surveys from 2013, 2014, 2016 and 2017 (N = 321, 505, 322, and 3014 respectively). CEIs systematically sampled participants from 32-40 randomly selected franchisees each year. Household wealth coefficients from Ghana Demographic and Health Surveys (2008 and 2014) were applied to CEI wealth data to situate sample wealth relative to the national population. Client wealth distribution was estimated, along with use of family planning, maternal health, sexual and reproductive health, malaria, child health services, by wealth. For 2017 logistic regression investigated associations between three programme strategies - empanelment of providers with the National Health Insurance Scheme (NHIS), subsidising poor household membership with NHIS, franchising providers in poor districts and use of franchise providers by poor clients.

Results

Dramatic improvement is evident in the wealth distribution of BlueStar clients in 2017, compared to previous years. In 2013 0.6% of clients were in the poorest population quintile, rising to 21.4% in 2017. In 2017 no significant association was found between client poverty status and provider empanelment with NHIS, or between client poverty and attendance at empanelled facilities in districts receiving NHIS subsidised enrolment. A significant positive association was found between provider district poverty incidence and client poverty, with poor clients 7.77 times more likely to use a provider in high poverty incidence districts, compared to low poverty districts.

Conclusions

The increase in poor clients amongst Ghana’s BlueStar network in 2017 reflects a break-through in this model historically underutilised by the poor. Regression analysis indicates that critically associated with client poverty is provider location in poor districts. MSI Ghana expanded franchisee coverage into five new regions in 2016/17, all substantially poorer locations than previous years. This strategy alone seems to have critically improved coverage for the poor. The other two strategies may need more time to illicit effects.
Why not? Understanding the spatial clustering of private facility-based delivery and financial reasons for homebirths in Nigeria

Introduction
Universal coverage of skilled attendance at childbirth is crucial to ensuring safe motherhood, yet many women in resource-scarce settings deliver outside of a health facility without skilled attendance. In Nigeria, facility-based deliveries (FBD) are typically attended by skilled professionals, but few births are facility-based, and subnational inequalities exist. Levels of FBD and private FBD are significantly lower for women in certain south-eastern and northern regions. The healthcare utilization context of an individual's lived environment often have unique characteristics that affect demand for and supply of health care. However, factors for service non-uptake have largely been analysed without consideration of such local context. This may be due to the lack of suitable data.

Working in a GIS, we present a novel analytical approach to examine the relationship between women's reasons for homebirth and community-level, health-seeking environment using individual-level data. We compare the extent to which women who stayed home for childbirth cited cost as their reason across places with varying levels of private FBD.

Methods
The most recent live births of 20,467 women were georeferenced to 889 locations in the 2013 Nigeria Demographic and Health Survey. Using these locations as the analytical unit, spatial clusters of high and low private FBD were detected with Kulldorff statistics in the SatScan software package. Across the detected spatial clusters, we obtained the predicted percentages of self-reported financial reason for homebirth from an adjusted generalized linear model.

Results
Overall private FBD was 13.6% (95%CI=11.9,15.5). We found ten clusters of low FBD (average level: 0.8%, 95%CI=0.8,0.8) and seven clusters of high private FBD (average level: 37.9%, 95%CI=37.6,38.2). Clusters of low private FBD were primarily located in the north, and the Bayelsa and Cross River States. Financial barrier was associated with high private FBD at the cluster level – a 10% increase in private FBD was associated with a rise of 1.94% (95%CI=1.69,2.18) in nonusers citing cost as a reason for homebirth.

Conclusion
Our results indicate that where private FBD is common, women who stayed home for childbirth had a mild increased tendency to cite cost as a reason. In such settings, women might not be able to gain effective access to public care, or face an overriding preference in the community to use private services. The approach presented offers a way to fill some existing analysis gaps and helps identify context-specific policy approaches to improve the provision of health services that people will utilize.
Engaging new actors to address the problem of safe specimen transport in Mali: early lessons from a pilot experience in Sikasso region

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Context

Effective specimen transport systems are critical in epidemics, ensuring that samples quickly, reliably and safely reach laboratories for analysis. In Mali, the few national laboratories qualified to diagnose dangerous pathogens are centralized in the capital. A major challenge is ensuring a system for collecting and rapidly sending specimens from the periphery to central labs for testing, respecting biosafety and biosecurity norms. Mali’s current system for sending samples is largely ad-hoc and depends on untrained public transport companies, an approach which carries risk of spoilage, delays, and accidental pathogen release.

Method

A pilot intervention was carried out from mid-2016 to mid-2017, examining the effectiveness of engaging the trained Poste du Mali to deliver samples from district to central level, versus the current public transport system. Contracts were established with the post in three districts, covering 71 health centers. To compare the two means of specimen transport, data was collected for these districts in the same period of the preceding year, when public transport was used. Comparisons were made on dimensions of timeliness and condition of specimens upon arrival.

Results/Discussion

From pilot districts, 41 specimens were sent using public transport and 51 via post (n=92). These included suspected meningitis, measles, yellow fever, and polio (AFP fecal) samples. Only 46% of 41 samples sent by public transportation were received in Bamako within 72 hours of collection, versus 71% of samples sent via the post. This difference is statistically significant (p-value<.05). The results show a strong correlation between faster delivery time and utilization of the post. Further, 98% of post samples arrived in good condition at the receiving laboratory, versus 93% on public transport.

Cost comparison of the systems was difficult. Payment to public transporters is per-specimen (thus lower-cost during non-epidemic periods); in this pilot, the post was paid a monthly fee (which might create cost efficiencies during epidemics.) Further analysis and national-level discussion is needed regarding the most efficient costing mechanism. Furthermore, the pilot and the existing system only reach district level; the community-to-district specimen pathway should be further strengthened in scale-up.

Conclusion

Engaging the Malian post to transport specimens from districts to central level is feasible, and may be more efficient and effective than relying on public transport. Scale-up requires cost optimization based on average sample loads in epidemic and non-epidemic periods. Other countries in the region which use public transport for sending specimens might benefit from exploring similar options.
Anthonia Njepuome, PHISICC National Coordinator
Poster Number: 330

Engaging with stakeholders cannot be left to chance: a formal and informal mixed approach within a paper-based health information systems project

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Introduction

Complex problems have no easy solutions. Improving health systems (HS) requires strong leadership and coordinated actions between parties including: health, finance and other non-health sectors; governmental, non-governmental, bilateral and multilateral agencies; policy makers, managers and providers; and researchers and users. Each stakeholder has legitimate diverse priorities and different approaches to similar problems. The challenge to exert coordinated actions may exceed the HS challenges they are meant to address. However, there is no blueprint on how to smoothly engage with this variety of stakeholders in a really effective way.

Methods

In order to engage with stakeholders to a research to improve paper-based health information systems (HIS), we devised several complementary strategies in Côte d'Ivoire, Mozambique and Nigeria: systematic policy documents reviews, stakeholders' analyses, visual analyses of decision pathways, consensus building workshops, terms of reference for key actors, shared decision making, knowledge transparency and care for personal relations. One national coordinator in each country, monitored perceptions and followed decision pathways through frequent formal and informal exchanges. Findings were periodically reconciled and validation sought from stakeholders.

Results

Document reviews provided the landscape of the governmental health sector decision pathways in the countries. For example, in Nigeria, HIS are dealt within two entities: the National Primary Health Care Development Agency and the Federal Ministry of Health. Stakeholder suggested that the main influencers were the National Bureau of Statistics, the National Population Commission, and AFENET-NSTOP. However, in Côte d'Ivoire, the primary influencers were MEASURE, The Global Fund and the HIS unit. Discussions among stakeholders before wall-sized organisational charts revealed striking differences between theoretical and practical decision making in the three countries.

Complementary strategies provided continuous inputs about the changing policy and research environment to signal early warning signs of disagreement and to ensure that decisions were shared. These arrangements enabled, for example, the mitigation of the effects of senior staff changes in Mozambique or the identification of new policy forums relevant to the research.

Conclusion

Effective stakeholder engagement in research requires knowledge monitoring of the HS structures and context. Taking this seriously involves the design of specific, budgeted activities which should be undertaken from the very start of the research process supported by formal and informal mechanisms.
Mortality due to low quality health systems—implications for universal health coverage

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Background: Universal health coverage has been proposed as a strategy to improve health in low- and middle-income countries (LMICs). However, this is contingent on provision of good quality health care. We estimate the excess mortality for conditions targeted in the Sustainable Development Goals (SDG) that are amenable to health care and the portion of this excess mortality due to poor quality care in 137 LMICs. This analysis was conducted as part of the Lancet Global Health Commission on High Quality Health Systems in the SDG Era.

Methods: Using data from the Global Burden of Disease study, we calculated mortality amenable to personal health care for 40 SDG conditions by comparing case fatality rates between each LMIC with corresponding rates from reference countries with strong health systems. We used data on health care utilization from population surveys to separately estimate the portion of amenable mortality attributable to non-utilization of health care versus that attributable to receipt of poor quality care.

Findings: 17·0 million excess deaths from 40 conditions occurred in LMICs in 2015. After excluding deaths that could be averted through public health measures, 7·0 million excess deaths were amenable to health care, of which 4·4 million were due to poor quality and 2·6 million were due to non-utilization of health care. Poor quality of health care was a major driver of excess mortality across conditions, from neonatal and communicable disorders to recently rising health threats such as cardiovascular disease and injuries.

Discussion: Universal health coverage for SDG conditions could save 7 million lives per year but only if expansion of service coverage is accompanied by investments in high quality health systems.
A framework to evaluate quality improvement models in newborn care engaging the private and public sector in Telangana state, India.

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Purpose: Quality improvement (QI) approaches focused on increasing the uptake of evidence-based practices are increasingly used to engage private and public providers in quality care provision, but a framework to understand how changes are generated in different hospitals in a middle income setting and whether these models can operate sustainably and at scale is lacking.

Focus: this paper develops a theory of change to explain how continuous and collaborative QI activities may generate changes in the uptake of evidence-based practices, and formulates hypotheses about the interaction between the assumed mechanisms and outcomes and contextual conditions, with particular focus on potential differences between private and public sector providers. The theoretical framework emerges from a literature review of determinants of effective implementation, and mechanisms of change of collaborative QI interventions. It was developed through iterative dialogue with designers and implementers of a collaborative QI intervention targeting secondary and tertiary public and private facilities in Telangana state, India. The emerging theory of change conceptualises intra-organisational changes in behavioural norms, shared leadership and organisation of care to arise from the mutually reinforcing interaction between an active QI team with adequate skills and capacity for data analysis, and a supportive leadership committed to data-driven decision-making and innovation, and with capacity for system-thinking. Intra-organisational changes are enhanced by collaborative efforts through normative pressures and healthy competition, if providers are open to data sharing and strong professional networks across public-private providers exist. System-level factors, such as quality assurance and financial incentives, may enable or hinder the activation of these mechanisms, and operate differently on private and public sector providers, possibly more weakly in the private sector, in contexts with low governance and regulation.

Significance for the sub-theme area: This conceptual framework allows the empirical evaluation of a programme to engage public and private sector facilities empanelled with a publicly funded insurance trust in newborn care quality improvement in Telangana state, India, with a combined caseload of 345 deliveries monthly. It advances the understanding of the role of private sector in the provision of newborn care, and enables a critical analysis of models of private sector engagement in government-backed QI, including public-private interaction and collaboration, and governance and economic incentive approaches.

Target audience: the framework is relevant to researchers, practitioners and policy-makers studying models for private sector engagement in quality care provision, which are sustainable and capable of operating at scale.
Poster Abstracts

Kate Gilroy, Maternal and Child Survival Program/JSI
Poster Number: 333

Quality of management and treatment services for sick children at patent and proprietary medicine vendors (PPMVs) in two states in Nigeria


Background: Patent and Proprietary Medicine Vendors (PPMVs) are an important source of treatment in Nigeria, including for sick children. There is limited evidence about the quality of services they provide and concerns are widespread that PPMVs provide poor quality services. The Maternal and Child Survival Program (MCSP), in close coordination with public and private state and national-level stakeholders, is working to improve and assess the quality of PPMV services through an approach entitled “Enhancing Quality iCCM through PPMVs and Partnerships” (EQuiPP).

Methods: As part of the implementation research to assess the EQuiPP approach in four local government areas in Kogi and Ebonyi states, we conducted a baseline household survey among families (n=1600) with children under the age of five who had been sick with diarrhea, fever or pneumonia in the two weeks preceding the survey. We are conducting assessments among 120 PPMV shops before and during the roll-out of the EQuiPP approach. The assessment methods, not frequently used in the informal private sector, include direct observation of services provided to sick children under-five years of age with clinical re-examination, as well as a shop audit and hypothetical case scenarios.

Results: Preliminary results show that among families of children with diarrhea, 40.0% reported seeking care at a PPMV shop and 37.1% sought care at hospitals, health centers or clinics. A greater proportion of families with febrile children sought care at hospitals, health centers or clinics (47.1%) than at PPMVs (41.3%). Families reported that just over 40% of children with diarrhea seen at a PPMV received ORS, while only 10.8% received zinc. Among families with febrile children seeking care at the PPMV, 11.9% reported that their child was administered a rapid diagnostic test (RDT) and that 40.4% received an ACT. Baseline and midline assessments of the directly observed quality of PPMV services will be available at the time of the conference.

Conclusion: Preliminary findings confirm that PPMVs are a significant source of care for childhood illness, but that the quality of services is less than adequate—for example, the low rates of RDT testing for febrile children. EQuiPP is a promising approach to improve quality of services where a significant proportion of sick children receive care. Recognizing that household surveys are subject to recall biases, we are also conducting a rigorous assessment at PPMV shops with clinical re-examination as the gold standard to determine more conclusively baseline and post-EQuiPP quality of PPMV services.
Evaluating Structural Quality Indices for Labor and Delivery, Postnatal, and Sick Child Care

Co-authors:  Emily D Carter-Johns Hopkins Bloomberg School of Public Health; Micky Ndlovu-Chainama College of Health Sciences; Melinda Munos-Johns Hopkins Bloomberg School of Public Health; Abdoulaye Maïga-Johns Hopkins Bloomberg School of Public Health; Lazare Glebelho Sika-École Nationale Supérieure de Statistique et d'Economie Appliquée

Background: There is growing interest in measures of “effective coverage,” which combine intervention need, utilization, and service quality. Effective coverage estimates can be generated by combining population-based care-seeking data with healthcare quality data. Measures of healthcare providers’ capacity to provide appropriate care, or structural quality, are more feasible to collect at scale than direct observation of quality of care (QoC). However, measuring structural quality is sufficient only if it is a reasonable proxy for QoC.

Methods: We evaluated multiple indices of service-specific provider structural quality using data from two studies designed to estimate effective coverage of management of child illness in Southern Province, Zambia and effective coverage of maternal, newborn, and child health (MNCH) in the Savanes District of Cote d’Ivoire. Information on healthcare providers’ structural quality was assessed using a tool modeled on the WHO Service Availability and Readiness Assessment (SARA). An additional provider knowledge module was administered in Zambia. In Cote d’Ivoire, QoC was assessed through observation of postnatal care (PNC) and sick child visits and provider-reported care administered during the most recent delivery. In Zambia, QoC was assessed through provider-reported case management (diagnosis and treatment) of individual children using a phone application. Correct management was defined using existing safe childbirth, UNICEF/WHO PNC, and IMCI guidelines. Multiple structural quality indices were constructed from the SARA data, including existing standard scores, truncated indices, and latent variable approaches. The performance of each index was evaluated against the provider and service-specific estimate of QoC for goodness-of-fit and predictive accuracy using regression analyses and cross-validation.

Results: Structural quality data were collected for 316 providers in Cote d’Ivoire and 83 providers in Zambia, including public, private, and community-based providers. In Cote d’Ivoire, 183 PNC and 344 sick child consultations were observed. In Zambia, 20 providers recorded data on management of sick children. Indices based on comprehensive standard guidelines demonstrated strong fit. Indices with a more limited set of indicators addressing availability of essential commodities and human resources showed good predictive accuracy and were more concise. In Zambia, inclusion of a knowledge domain improved index performance.

Discussion: There were tradeoffs in maximizing the proportion of variability in QoC explained by the indices and constructing concise and predictive scores with good face validity. There is need for further assessment of indicators of structural quality against gold-standard measures of care to identify those measures that are most predictive of correct management of MNCH in other contexts.
Exploring the institutional arrangements for linking health financing to the quality of care: Lessons from Indonesia, the Philippines, and Thailand


Background

As countries work towards achieving universal health coverage (UHC), expanding access to health services while maintaining and improving quality of care remains a major priority. Poor quality of care can prevent countries from achieving the desired improvements in health outcomes and lead to unnecessary costs. Strengthening health governance structures has emerged as an essential component to improve the quality of care, particularly as the quest for UHC is often associated with changing institutional roles and the emergence of new institutions, such as new payers, that may have powerful tools at their disposal to influence quality. The goal of this study is to understand the evolution of the institutional arrangements designed to enable payers to ensure and promote the quality of care in Southeast Asia. This includes an exploration of the institutional arrangements that link the quality of care to health financing in Indonesia, the Philippines, and Thailand.

Methods

We conducted an initial desk review, followed by 66 in-depth semi-structured interviews with national and subnational actors across all three countries. We explored how institutional arrangements to support quality have evolved, how well they delineate roles and responsibilities, as well as their potential for engaging payers in governing the quality of care. A thematic content analysis of the interview data was conducted using NVivo 11.

Results

There were important variations in the institutional arrangements governing the quality of care across the three countries. In the Philippines and Indonesia, the role of the payer in ensuring quality of care has yet to be fully realized, as quality considerations have to-date been overshadowed by an emphasis on increasing coverage and containing escalating costs. The existence of independent accreditation bodies enhances accountability and transparency in the accreditation process, thereby strengthening institutional support for quality. Simultaneously, there are opportunities to better connect the payer in Indonesia to accreditation and other quality improvement efforts. Patient advocacy groups are one segment of civil society that is frequently overlooked in service quality improvements, and institutional arrangements for incorporating civil society appear in need of further development.

Discussions/Conclusions

Challenges may result from the absence of clearly defined roles, conflicting roles, weak enforcement, weak organizational capacity, or weak collaboration among various institutions. Lessons learned and best practices on institutional arrangements for quality in Indonesia, the Philippines, and Thailand can inform the process of defining institutional arrangements for quality in other countries where payers are taking on a larger role.
Strengthening Quality Management Systems: Ownership and sustainability in Nairobi County, Kenya

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Purpose

Quality is characterized as one of the four mediators connecting the six WHO health system building blocks to health system outputs. It is therefore crucial to ensure that health systems are strengthened to implement quality in a sustainable and effective manner, which requires ownership and involvement from all levels of the health system.

Focus/content

In Kenya, quality measures in the health sector have been fragmented, with various approaches being implemented at pilot health facilities. In 2011, the government developed a conceptual framework for a holistic quality management system in the health sector: the Kenya Quality Model for Health (KQMH). Implementing KQMH has, however, been focused at the facility level, without equal attention paid to strengthening other levels of the healthcare system. The USAID/Kenya and East Africa Afya Jijini program is addressing this gap by employing an innovative approach that ensures, ownership and sustainability of KQMH by strengthening all levels of the health system; the County, sub-counties, and facilities.

The project supported the existing County-level Quality Assurance/Quality Improvement (QA/QI) unit and Technical Working Group (TWG) hold their quarterly meetings to plan and evaluate QA/QI activities within the County. As a result, a County QA/QI coaching strategy, which is key for sustainability, was developed.

Afya Jijini supported the Sub-County Health Management Teams to supervise, coach and mentor facility level QA/QI teams. The program also helped organize 27 quarterly sub-county QA/QI best practice sharing and facility coaches’ forums aimed at facilitating shared learning. Participation increased from below 50% at the end of 2016 to 87% at the end of 2017 resulting in ownership of QA/QI activities.

The program trained 181 HCWs on KQMH, building their capacity to identify and address service delivery gaps using QA/QI principles. The program also provided coaching to facility QA/QI teams, with the frequency of these meetings increasing from 36 at the end of 2016 to 103 at the end of 2017 resulting in improved service delivery indicators.

Significance for the sub-theme/field-building dimension of relevance

Implementing QA/QI initiatives through targeted interventions at every level ensures sustainability and strengthened health systems.

Target audience

This approach can be used by policy makers and program managers implementing quality initiatives in the healthcare sector.
Investigating the relationship between quality of discharge and health outcomes for chronic disease patients in 3 hospitals in India

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Background: The seamless provision of healthcare within and between settings is integral for successful chronic non-communicable disease (NCD) management. Poor discharge communications compromise continuity of care and have been repeatedly linked to negative health outcomes in high-income countries. There is currently a dearth of similar research from India and other low/middle-income countries. Objectives: Primary: To investigate the relationship between the quality of discharge notes and health outcomes for chronic NCD patients within five and eighteen-weeks of discharge. Secondary: To describe patient and system-related factors affecting quality of discharge for chronic NCD patients. Methods: Prospective study; 546 chronic NCD patients (Chronic Respiratory Disease, Cardiovascular Disease, or Diabetes) were recruited from three government hospitals in Himachal Pradesh and Kerala states, India. Structured surveys were completed at admission, discharge, five-week follow-up, and eighteen-week follow-up. Survey data covered patient health status and healthcare information exchange practices. Multiple logistic regression was utilised to explore the relationship between patients failing to receive items of key healthcare information on discharge notes and the likelihood of experiencing the following post-discharge adverse events: death, hospital readmission, and self-reported deterioration of NCD/s. Results: All patients received handwritten discharge notes, predominantly on sheets of paper with minimal structure (70.7%). Less than one-third (30.8%) of discharge notes contained the following information necessary for facilitating care transitions: diagnosis, medication information, lifestyle advice, and follow-up instructions. Most patients felt it was important to receive discharge notes (94.0%); mainly because they help them to understand and explain their condition/s (64.1%). At eighteen-week follow-up 25 (4.6%) patients had died, 68 (12.5%) had been readmitted and 31 (5.7%) reported that their NCD/s had deteriorated. The adjusted regression analyses (adjusted odds ratio – AOR) found that patients who failed to receive the following items of healthcare information on discharge notes were significantly more likely to have died within eighteen-weeks of discharge: diagnosis (AOR=12.30; 95%CI 2.75,55.04), lifestyle advice (AOR=2.38; 95%CI 1.01,5.64), and follow-up instructions (AOR=2.63; 95%CI 1.13,6.17). The relationship between failure to receive medication information and an increased likelihood of self-reported deterioration of NCD/s at eighteen-weeks of discharge was also approaching significance (AOR=2.28; 95%CI 0.97-5.37). Discussion: Our study demonstrates that sub-optimal discharge practices are likely to be compromising the continuity and safety of chronic NCD patient care in India. Structured training, guidelines and documentation may help to improve communicative practices and overall chronic disease management. Further study is required to validate the relationship between discharge quality and health outcomes.
Challenges of quality governance in a pluralistic Mexican Health System.

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Background: Mexico has a complex pluralistic healthcare system. The Ministry of Health (MoH) is responsible for generating policies, stewardship, public health programs and health information. Then, different health institutions deliver healthcare to diverse segments of the population. The people working in the formal labor market are affiliated with mandatory social health insurance; primarily with the Mexican Institute of Social Security (IMSS) (62 million affiliates) and the Institute of Social Security of State Workers (ISSSTE) (12.9 million affiliates). The people without social security are affiliated with the non-contributory health insurance program (Seguro Popular) (54 million affiliates). The local Ministry of Health Secretariats (MoHLHS) in each Mexican state provide healthcare to Seguro Popular affiliates. Universal coverage, financial protection, equitable access and quality of healthcare (QoC) are the leading healthcare policies. However, the pluralistic features of Mexico’s health system challenge the current QoC governance. Multiple health and QoC indicators are below OECD average, indicating the need to improve the QoC. Therefore, the objectives of this study were to describe the current characteristics of QoC governance in the Mexican public healthcare sector and offer recommendations to its strengthening.

Methods: We conducted a nation-wide survey on QoC governance. The Lancet Global Health Commission on High-Quality Health Systems in the SDG Era framework steered the study. A semi-structured online questionnaire with open-ended questions served to capture the free expression of the participants without imposing theoretical categories. The key informants were leaders responsible for the QoC evaluation and improvement activities at National, State and facility levels at MoHLHS, IMSS and ISSSTE. The results were analyzed through thematic content and descriptive analyses.

Results: 320 QoC leaders from the MoH and MoHLHS (n=100), ISSSTE (n=110) and IMSS (n=110) answered the survey. We found uneven and fragmented QoC governance among the health institutions; alignment with MoH policies and strategies regarding QoC priorities, evaluation and improvement was weak. Common barriers to governance for QoC emerged, namely inadequate organizational structure at sub-national and facility levels, lack of financial resources, lack of training in QoC among executive/managerial staff, and health professionals who show resistance to change.

Discussion/conclusions: In a pluralistic health care system, MoH stewardship to determine QoC policies and lead governance should be fostered. Health institutions must share common QoC goals and indicators. There is an urgent need to reinforce the QoC governance through increasing financial and human resources, strengthening organizational structures, training healthcare professionals and institutionalizing QoC culture.
The Evolution of Cambodia's Health Systems Financing: Applying a Quality Lens

Co-authors: Somil Nagpal - The World Bank; Lo Veasnakiry - Ministry of Health, Royal Government of Cambodia; Kayla Song - The World Bank; Voleak Van - The World Bank

Cambodia’s Health Equity and Quality Improvement Program (H-EQIP) includes redesigned Service Delivery Grants (SDG), aimed to serve two key objectives: improving quality of service delivery and ensuring financial protection for the marginalized. This program builds on a decade of experience from the internal contracting mechanism instilled in a selection of health entities, called the Special Operating Agencies (SOAs) in the previous phases of the country’s health sector strategy. The SOA arrangement marked an advancement from several contracting-in and contracting-out models operational in the previous decade, aiming to address concerns around high costs with low financial sustainability of alternative models. These performance agreements with health administrative offices and health facilities for conditional disbursements of grants improved managerial capacity and quality of care to some extent, but encountered several evolutionary challenges to move aspirations to reality.

The paper reviews a series of events over the past two decades of Cambodia’s health systems development since its post-conflict period. At each major transition, the paper describes the i) why (i.e. rationale for change), ii) how (i.e. process or new arrangements), and iii) who (i.e. new or old actors & their dynamics, communication) with a focus on quality of service delivery.

A mixed-method approach has been employed for the documentation. A desk review of official documents and published literature has been conducted to identify the key events. Key informant interviews have revealed deeper insights into the processes and dynamics involved during and between these events. These insights were then reviewed in the light of trends and patterns in administrative data and secondary analysis of survey data.

Four distinct phases of evolution emerged, generated according to the key timeframes: Health Sector Reforms, Health Sector Support Programs, Transition to H-EQIP, and Implementation of H-EQIP. In each timeline, different transition themes were identified: macrofiscal (e.g. Increasing government financial contribution, Pooled fund establishment), subnational autonomy (e.g. Bank accounts, operational incentives), Health Equity Fund expansion (e.g. Implications of HEF-related events on the SDG development), fund availability at health facilities, etc. The analysis is focused around the implications of these themes on improving quality at the health facility-level. The evolution of the SDG system is noteworthy as the degree of national ownership on health financing and management has dramatically increased over the years. Moreover, several management transitions reveal the strengthened local capacity to carry on the oversight of the evolving system, and its emerging implications on quality of health services.
Measuring performance on the Healthcare Access and Quality Index: results and health system implications for 195 countries and selected subnational locations from 1990 to 2016

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Background

For a health system to deliver for all, it must provide good access to high-quality healthcare. National and subnational levels of healthcare access and quality can be approximated by measuring mortality rates from causes that should not be fatal in the presence of effective medical care (i.e., amenable mortality). Drawing from the Global Burden of Diseases, Injuries, and Risk Factors Study 2016 (GBD 2016), we quantify gains and gaps on the Healthcare Access and Quality (HAQ) Index for 195 countries and territories, as well as subnational locations for a subset of countries, from 1990 to 2016.

Methods

To calculate the HAQ Index, we first mapped the Nolte and McKee list of causes amenable to healthcare to 32 causes of death in the GBD hierarchy. Second, we sought to account for differences in mortality that may be more closely related to differences in risk exposure than true variation in healthcare access and quality through risk-standardization to global levels of environmental and behavioral risks. For cancers, we took an alternative approach, using mortality-to-incidence ratios (MIRs) to better approximate cancer detection and treatment. Third, we scaled each cause on a scale of 0 to 100, with 0 being the highest risk-standardized death rates or MIRs observed from 1990 to 2016 and 100 being the lowest across location-years. Last, we used principal components analysis to compute the HAQ Index for every location over time.

Results

Nearly all countries recorded significant increases on the HAQ Index between 1990 and 2016, yet gaps between countries with the highest and lowest levels widened from 76.5 in 1990 to 80.9 in 2016. China, South Korea, and Turkey recorded some of the largest increases in healthcare access and quality from 1990 to 2016, while progress accelerated in many places from 2000 to 2016, particularly in sub-Saharan Africa and Southeast Asia. Conversely, some countries in Latin America and higher-income countries like the USA, saw advances stagnate since 2000. Amid overall improvements, China and India still showed marked subnational disparities in 2016. Mexico and Brazil also experienced considerable state-level inequalities in healthcare access and quality over time, whereas Japan actually narrowed differences by 2016.

Discussion

Despite global progress on healthcare access and quality, vast disparities persist across and within countries. National and international stakeholders must prioritize improving both healthcare access and quality, and to do so across the full range of health services needed by all populations.
Good ratings for poor quality: low healthcare expectations among internet users in 12 LMICs

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Introduction

People's expectations of healthcare in LMICs are poorly understood yet important for understanding how people make decisions about healthcare, how satisfaction with care is formed and how to keep health systems accountable for high quality care. This analysis was conducted as part of the Lancet Global Health Commission on High Quality Health Systems in the SDG Era.

Methods

We fielded an internet survey in 12 LMICs that included healthcare vignettes designed to portray poor quality care. Ratings of these vignettes were used to measure expectations of healthcare. We fit a multivariate logistic regression model based on a conceptual framework of expectations to better understand the role of demographic variables, experience with the health system and self-reported health status on expectations of care.

Results

13,850 people completed our survey. Ratings of poor-quality vignettes were high in all countries indicating low expectations of care. 58% of respondents said that a vignette describing a visit for hypertension during which the patient's blood pressure is not checked is good, very good or excellent quality care. Higher educational attainment was associated with high expectations (OR=.82, 95% CI .75-.91). Good self-reported health was associated with low expectations (OR=3.40, 95% CI 2.63-4.41). A history having experienced poor treatment by a health professional was also associated with low expectations (OR=1.47, 95% CI 1.17-1.83).

Discussion

High ratings of poor-quality care, a measure of low expectations of healthcare quality, are prevalent in LMICs. These low expectations are likely to dampen demand and limit the pressure that health systems experience to deliver high quality care. This finding points to an important opportunity for health system improvement through demand-side approaches that raise people's expectations of care.
Understanding Measurement, Interaction, and Systemic Drivers of Equity and Quality

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Background: Over 200 million people live in Uttar Pradesh, nearly 30% of them in poverty. The maternal mortality ratio is 359 deaths per 100,000 live births; 1.69 times higher than that of India as a whole. Deliveries increasingly happen within health care centers or hospitals, however facilities in UP score poorly on both clinical quality and patient-experience.

The Quality-Plus (Q+) study aims to identify and understand what makes some facilities exceptions: delivering both good clinical services and good patient treatment. The study is focused on the UP public sector high-volume (>200 births/month) facilities, where ~80% of all deliveries occur.

Methods: Facility clinical quality was assessed using self-reported data from nearly 750 health facilities across UP. Forty geographically representative high-volume facilities from the top and bottom quartiles were selected and assessed to verify structure and process quality. 2000 delivery-patient exit interviews were conducted to assess person-centered care (PCC). 251 providers were surveyed and, with 50, in-depth interviews conducted. We defined ‘positive deviance’ as facilities which scored in the top 1/3 for clinical quality and also the top 2/3 for PCC. Logistic regression and qualitative findings were combined to both identify and explain the proximate determinants of a facility being a ‘positive deviant’.

Results: Nine of the 40 facilities met our criteria for positive deviance (PD). Women giving birth in PD facilities were more likely to deliver with a trained attendant ($p<.01$); more likely to be told the reason for an examination ($p<.01$); and more likely that they or their child would be examined after delivery ($p<.05$). Providers and staff in PD facilities worked fewer hours ($p<.05$), reported few unfilled positions, and more senior staff. The facility director was more likely to live near or within the grounds of a PD facility compared to a non-PD facility. Results remained significant after adjusting for facility type, size, staff/patient ratio, and urban/rural location.

Conclusions: Even in well-equipped, high-level hospitals, patient treatment, care, support, and clinical practices such as presence during delivery are often of poor quality. This is not because of overwork and does not differ between hospitals and clinics. In high-volume facilities in Uttar Pradesh what appears to drive exceptional high quality – clinical readiness and patient treatment – is not facility type, location, patient demographics or volume, but rather staff working conditions, morale, and leadership engagement. Qualitative analysis of provider interviews further explores these results.
Lara Vaz, Save the Children - US  
Poster Number: 343  

**The Pathway to High Effective Coverage at Scale – a framework for strategy, monitoring and evaluation**

Co-authors: Lara M. E. Vaz- Save the Children - US; Tanya Guenther- Save the Children - US; Lynne Franco-EnCompass LLC; Kelsey Simmons-EnCompass LLC; Elaine Scudder- Save the Children - US; Stephen Wall- Save the Children - US

Purpose: Linking health systems changes to sustained coverage improvements is challenging. The Pathway to High Effective Coverage at Scale is a framework to guide and assess country-level progress, identify key ingredients for success, determine system capacity to implement, and gauge strength of implementation. It serves as a structure to unpack health systems factors, how they link and identify critical bottlenecks to achieving desired health outcomes. The Pathway can be used at a national or sub-national level for strategy development, multi-sectoral collaboration among partners, development of monitoring systems, and evaluation.

Focus/content: The Pathway includes six components, each with sub-elements for consideration. National and subnational readiness, including policies and management capacity, are examined alongside health systems infrastructures that provide the context for implementation strength, ultimately determined by whether delivery elements are in place and functioning. These elements are necessary to achieve effective coverage (defined as services being provided to those needing them with sufficient quality) and impact at scale. Progress within the Pathway is not expected to be linear; rather, the framework defines the various important elements to address to reach high effective coverage.

We applied the Pathway to examine health systems needs for delivery of newborn care interventions in seven countries. The Pathway was customized for each context and intervention; sub-elements were considered for program planning, data collection, analysis and interpretation. In four countries, the Pathway has been further applied to define and measure strength of implementation, building required metrics into routine health information systems, surveys and special studies. We will present several examples of Pathway use across the different approaches. This framework was also applied in external evaluations of newborn care progress, during the final evaluation of Saving Newborn Lives, and in a post-hoc program evaluation to assess sustainability and continuity of results, ultimately applied in 7 countries.

Significance: This framework provides a robust analytical model for linking health systems and policy factors with those at the point of service delivery in ways that can generate useful discourse on what action needs to be prioritized, how partners can best collaborate, and the ways in which success should be defined and measured. It provides a guide for generating and using data from routine or other sources to monitor progress, and lends itself well to document review and qualitative data to fill gaps. The Pathway is a powerful tool that can be adapted to any specific interventions or package of interventions.
Levels and trends in the quality of outpatient malaria case management stratified by malaria risk in Kenya – eleven national cross-sectional health facility surveys, 2010-2016

Background: Malaria is among the leading causes of mortality in Kenya and globally. In 2010, the WHO recommended universal parasitological testing of all suspected malaria patients and treating only those who test positive with artemisinin-based combination therapy (ACT). Reports across Africa have often suggested non-adherent practices, however, large-scale performance trends in the quality of outpatient malaria care and long-term relation between the quality of care and different levels of malaria risk is largely unexplored, despite the potential influence of malaria risk on case-management practices.

Methods: Secondary analysis of data from eleven national cross-sectional surveys undertaken in outpatient departments of public health facilities in Kenya from 2010 to 2016 is ongoing. The adherence outcomes of interest include: testing of suspected malaria patients, ACT treatment for test positive patients, no antimalarial treatment for test negative patients, and performance of dispensing and counselling tasks for patients treated with ACT. To examine relation between quality of care indicators and levels of malaria risk three types of risk classifications are used 1) as programmatically defined, 2) from health worker perspective, and 3) based on true malaria prevalence. Time trends will be evaluated using regression modelling.

Results: The preliminary results indicate overall improvement trends in adherence to malaria test and treat indicators. Based on programmatic classifications of malaria risk, the performance levels and improvement trends were higher for patients in high malaria risk areas compared to those in low risk areas. The agreement between health workers perceptions of the level of malaria risk in comparison to programmatic and true malaria prevalence classifications improved overtime. The level and trend performance analyses based on perceptions of risk and true malaria prevalence are ongoing.

Discussion /conclusion: There is a variability in health worker adherence to outpatient malaria case management guidelines across the different malaria transmission areas. The prevalence of a disease and how health workers perceive the risk might be associated with the quality of care given to patients. The expected results will inform implementation of malaria guidelines and better targeting of interventions to improve health worker performance.

Keywords: Malaria, Case management, Malaria risk, Adherence, Test and treat, Kenya
Navneet Aujla, NIHR Global Health Research Unit on Improving Health in Slums, W-CAHRD

Poster Number: 345

The utility of using simulated patients for assessing technical quality of care of individual providers

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Background: In low and middle income countries (LMIC), individual providers are crucial in ensuring quality of care. However, reliable measurement of technical quality of care such as specialist knowledge and practical skills can be challenging. In resource-restricted countries, data recorded during routine practice (e.g. case notes) are often lacking or of poor quality. Simulated patients (i.e., individuals trained to act as a real patient to simulate a set of symptoms/problems) or standardised patients (i.e., actual patient trained to portray a particular case) may be a useful alternative to case note review in LMIC. However, the overall advantages and disadvantages of using simulated/standardised patients (SP) is not immediately clear from the literature. We conducted an overview of systematic reviews to examine reliability, validity, feasibility, acceptability and costs of SPs, to inform use particularly in LMIC.

Methods: We searched MEDLINE and Cochrane Library for relevant systematic reviews without time and language restriction. Titles and abstracts were independently screened by two reviewers. Only articles where SPs had been applied in a real-life (rather than educational) setting were included. We also searched reference lists of eligible articles and sourcing additional references from content experts is ongoing. Discrepancies between reviewers were resolved through discussion. Data were thematically coded and synthesised.

Results: Four systematic reviews were included, each covering between 21 to 46 studies. The reviews focus on application of SPs in assessing doctors (predominantly in high income countries) and pharmacy personnel (a mixture of high income and LMIC settings). SP methods have been used for many illnesses but are not suitable for emergency conditions and those requiring invasive examination or follow-up consultations. The emerging themes indicate that SPs are highly reliable (≥80% for presentation of simulated symptoms) with good face validity. Foiled simulation is low (<18%) and depends upon perceived credibility of the SP, for which initial training is key. However, SPs were reported to be time/resource intensive. Further, an important ethical consideration concerns the need (or not) to seek informed consent from healthcare providers being assessed. Combining SP assessment with training/feedback to care providers may enhance its acceptability and reduce bias associated with participation.

Conclusion: SPs are a valid and accurate method for assessing technical quality of care across diverse settings but are resource intensive and require careful planning and training.
Designing a management-tool for quality improvement in maternal and child health through synthesis of direct observation and insider-based judgement

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Background

Health problems due to poor quality maternal and child health (MCH) services remain as major burdens of disease in low-resource health systems. This Sierra Leone-focused study produces a low-cost and SMART (specific, measurable, achievable, relevant, time-bound) management-tool for Quality Improvement (QI) in their Health Service Delivery (HSD). In addition to deprived MCH indicators, Sierra Leone has limited resources and poor data quality typical for low-resource settings. Hence, it is an appropriate location for this research.

Methods

The study used Lot Quality Assurance Sampling (LQAS) which judges target achievement using a representative sample by applying a decision rule; in this case, the target is a desired standard for clinical Quality of Care (QoC). Our indicators concern the structure and processes supporting MCH; the standard is that 80% of facilities perform according to the national clinic guidelines set for the indicator. We conducted two Rapid-Health Facility Assessments as a situation analysis and a Weighted Group Judgements (WGJ), a prioritisation tool, to identify areas for remedial action. In-depth interviews and Focus Group Discussions followed to gain insight in the concepts and theories of health workers and health system managers. Data was collected for the entirety of Bo district and Bo town and Bo district during May 23rd and July 14th, 2017.

Results

HSD were in a desperate state. Bo town passed for 5 of 21 key service indicators; Bo district passed for 5 of 19 key indicators. Each key indicator was an index comprising several minor indicators. The displayed WGJ utility scores indicating remedial action should focus on increasing the availability of drugs and equipment. Qualitative data revealed that QI is perceived as being unlikely without better staff motivation, and Action Planning to direct professionals in the health staff hierarchy to meaningful management and supervision.

Conclusions

Synthesis of the study results, findings and literature led to designing a management-tool which allows for two-level analysis of the study setting. On multifactorial sub-system approach, which is compulsory for QI, predominantly targeting the availability of drugs and equipment. Secondly, improved motivation for health workers. Thirdly, continuous supportive supervision, including in health facility data management, is certainly promising to result in the desired QoC. As an adjustable, cost-efficient and SMART management-tool, the QI method has potential to sustainably improve the quality of HSD in Sierra Leone. However, further research is needed to measure successful and sustainable change in HSD for MCH through such an intervention.
A Participatory Action Research for health system bottleneck analyses in a PMTCT programme in Nigeria

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Background: Participatory Action Research (PAR) is an approach to research that enables action through a reflective cycle whereby participants collect and analyse data in real-world contexts and determine actions to be taken. It blurs the line between researchers and research subjects by empowering programme implementers become partner researchers as against being objects of research (respondents). This paper describes the use of PAR in identifying health system bottlenecks in PMTCT programme in two Nigerian Local Government Areas (LGAs) in 2016. Nigeria accounts for about 30% MTCT globally.

Methods: Using PAR, we supported programme managers in both LGAs to conduct bottleneck analysis (BNA) on PMTCT interventions using a modified Tanahashi model. The model measures six determinants of “effective coverage” of “tracer” interventions: Availability of essential health commodities and human resources; accessibility, acceptability, continuous utilization, and impact/quality of interventions delivered. Bottlenecks are identified as gaps in optimal coverage of each determinant. Tracer interventions include HIV Testing & Counselling, ARVs for PMTCT, and Infant HIV Testing.

Programme managers were supported to identify constraints using routine data analysed on an MS-Excel based BNA tool. Techniques like brainstorming, “5 Whys”, affinity and driver diagrams, were used to perform root cause analysis.

Results: We found that effective coverage across all tracer interventions was very poor. This was largely due to poor demand for services as well as a poor geographical distribution of intervention facilities. Generally, health facilities providing PMTCT services had a relatively good supply of commodities and trained human resources to deliver services. On the demand side, there was more acceptability and continuity of T&C services by women attending ANC when compared to other interventions. Despite the availability of commodities and human resources, 39% and 100% HIV positive pregnant women were not receiving ARVs in both LGAs respectively. Contrary to policy and programme guidelines, 78-100% of HIV-exposed children did not have blood samples taken for PCR tests within two months of birth. Further, 82-100% of HIV-exposed children whose blood samples were taken for PCR test within two months were positive, indicating high vertical transmission rates. Action plans were developed by the managers to address and follow-up on these bottlenecks. Detailed findings are presented tables and figures.

Conclusions: Our study demonstrates that BNA using a PAR approach is effective in identifying health systems constraints. Thus, it may be very helpful in aiding local health managers to address programme constraints quickly, within the confines of available resources.
Empowering families to reduce risk for very small newborns: iterating towards effective solutions in rural Nepal

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Background: In Nepal, >40% of births are at home, putting low birthweight (LBWt) newborns at risk. Globally, they account for 60-80% of newborn deaths. Having difficult geography and many births at home, innovative solutions are needed in Nepal to empower families on correct thermal care and feeding, and timely danger sign recognition and response. Earlier work in Nepal documented that foot-length (FL) cutoff of 7.0cm has good ROC characteristics for predicting birthweight (<2500gm). Work elsewhere demonstrates CHWs can classify LBWt babies with reasonable accuracy, using FL. We tested an approach empowering families to use a 7.0cm card distributed to pregnant women, with instructions and a toll-free number printed on it, for them to call, giving key care messages by voice recording.

Methods:

Two parallel components in 2 different districts. Component I: Formative focus group work, validating: Card could be used correctly by intended users (practicing on dolls). Rationale understood and valued. Phone messages well understood. Assessed district-wide distribution through an existing CHW network, confirming % of pregnant women reached, using the card, and calling toll-free number.

Component II: cluster RCT (n=4454) Pregnant women were given the card, told to use it to check if FL<7.0cm; if not, they were to phone number on the card for care advice. All subjects followed up by field staff over first month of life (assessing birth weight, FL, and other measures). Behavioral endpoints—among babies <2500g: Sought care from a health worker. Any reported skin-to-skin care. Analysis also included cascade: Used the card. Determined from FL that baby was small. Accuracy of classification. Called the number to hear the messages.

Results:

From Component I: Rationale for using the card and calling the number was understood and appreciated. Cards were successfully distributed to >60% of pregnant women. Postpartum follow-up documented a high proportion used the card.

From Component II: High proportion of families used the card. But only a comparatively small proportion of LBWt babies were correctly classified, resulting in few calls to the toll-free number. No statistically significant effect on the 2 measured care practices.

Discussion/Conclusion: Certain aspects of the original concept performed well but the weak point was accurate family classification of baby as LBWt and requiring special care. Those involved are now investigating alternative classification devices and procedures. With more robust LBWt case-identification at household level, further work is planned to test effectiveness and feasibility at scale.
Health systems and the humanitarian-development nexus in protracted displacement - Perspectives on the Rohingya refugee crisis in Bangladesh

Co-authors: Malick Dansokho-Liverpool School of Tropical Medicine

Background

Over 65 million people are forcibly displaced worldwide. Low and middle-income countries host 84% of the world’s refugees. Many of these countries have weak health systems requiring development aid. Within a decade, humanitarian funding requirements increased from US$4.8 billion to US$19.7 billion, most of which is needed to fund interventions in protracted crises. The chronic Rohingya crisis in Bangladesh is a contemporary example. New violence made it the world’s fastest-growing refugee crisis with over 620,000 refugees since August 2017, with most staying in remote areas like Cox’s Bazar. Health services struggle to meet the needs of both new arrivals and host communities.

Traditionally, humanitarian efforts focus on short-term relief of pressing basic needs with development aid covering longer-term support to build sustainable health systems. Refugee situations to date have largely been treated as short-term problems falling off the radar of development planning. At the World Humanitarian Summit 2016 both silos committed to bridge the gap between humanitarian and development action.

Aims & objectives

How are these unprecedented financial and political commitments harnessed to put this new integrated humanitarian and development approach into practice? Against the background of the Rohingya crisis in Bangladesh, this study explores how humanitarian and development actors consider the long-term health system consequences when planning humanitarian interventions. It also investigates how opportunities and challenges in doing so add to organisational learning to improve cross-sectoral action.

Methods

The study follows a hybrid approach combining an inductive narrative literature review with a qualitative exploration of the perspectives of key informants in humanitarian and development aid organisations through semi-structured interviews.

Results

Preliminary findings highlight the dearth of academic literature on the topic, both in relation to the Rohingya crisis and within a wider context. This emphasises the need for further research of grey literature as well as through key informant interviews.

Outlook

The research project is ongoing and will be finalised by August 2018. Bangladesh’s longstanding history of development partnerships is now meeting with exceptional humanitarian attention. Cross-sectoral action is required more than ever to achieve sustainable support for both the displaced and the local population. This study will produce a thematic framework to inform strategies for linking humanitarian and development action in scenarios of protracted displacement.
A mixed-methods research on health services utilization of the elderly migrants in Shanghai, China

Co-authors: wei wang-Fudan University; yongyi wang-Fudan University; fei yan-Fudan University

Background:
In 2014, the number of elderly migrants(≥60) in China was 10.6 million. Because of age, living environment change, social security benefits based household registration system (Hukou), these old people faced vulnerability of physiology, psychology and social inclusion, how about their health services utilization and health status? There had limited data on it. This research aims to understand the health services utilization of elderly migrants and its impact factors, to provide policy recommendations for improving health of elderly migrants.

Methods:
Mixed methods combing qualitative and quantitative research was adopted. Quantitative data (sample size = 752 in Shanghai) from 2015 National Internal Migrant Population Dynamic Monitoring Survey was used. In-depth individual interviews were employed. 30 elderly migrants from 3 communities in Shanghai were interviewed in 2015.

Results:
Among 752 Shanghai Elderly migrants, 96.4% of them thought they were healthy, 22.1% had high blood pressure or diabetes. Compared to local elders (have Shanghai Hukou), the physical condition of elderly migrants were much better, maybe since most of them came to Shanghai in order to looking after their children and grandchildren or looking for work. 427 elderly migrants (56.8%) chose to see doctor when they got sick, 37.1% bought drugs from pharmacies nearby, 2.4% took medicine from hometown, and 2.7% did not see doctor. By multiple-factors analysis, results show that the number of friends in Shanghai, health status and the cause of migration had significant impact on health services utilization of elderly migrants. By in-depth interview, the impact factors including knowledge of the city, family members accompanying, benefit package and cross-region settlement system of their health insurance and the income were mentioned more.

Conclusions:
The elderly migrants in Shanghai had better health status. By strengthening primary health system, intensifying the role of social organization and family supports and continually improving cross-region settlement system of health insurance would increase health services accessibility and utilization of elderly migrants, and provide more protection for the elderly migrants.
On the move: the challenge of providing routine immunization services to nomadic populations in Ethiopia

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Background: As childhood immunization coverage shows great disparity in many countries, there is a growing need to focus on the most hard-to-reach and marginalized populations. Some of the world's most vulnerable people live remote, nomadic lifestyles, and contacting these populations five times with quality vaccine in the first year of life is challenging.

JSI works to strengthen the routine immunization system in Ethiopia and supports bottom-up microplanning which builds health workers (HWs) capacity and engages community leaders who are instrumental in the planning and delivery of immunization services.

As part of a larger performance review, JSI examined whether microplanning improved immunization services for nomadic populations and overall immunization performance in study regions.

Methods: Cross-sectional mixed-design survey primarily collecting qualitative data through key informant interviews (36) and focus group discussions (11) complemented with quantitative data analysis from program data sources and documents.

Results: Prior to JSI support, most study districts were not engaged in microplanning for immunization. Availability of microplans improved at district level from 29% to 93%, and from 0% to 100% at the health facility (HF) level. After training, districts and their HFs used detailed plans for providing immunization services and increased the availability of services at facilities throughout the district. Use of the microplan to deliver and track immunization services improved from 14% to 58% at district level and from 0% to 95% at HF level. Respondents emphasized that microplanning meant better knowledge of, and greater ability to reach target populations through catchment mapping, target population estimating, and session planning. Microplanning increased community awareness of immunization and accountability of the health system, as plans were communicated to mothers who then demanded services. In addition, HFs used program data and engaged local communities to identify and track defaulter children. Microplanning allowed for better resource estimation, although respondents still acknowledged difficulties in reaching remote nomadic communities, mainly due to budgetary and logistics constraints.

Conclusion and Recommendation: Microplanning built the capacity of HWs in districts with large nomadic populations to identify, plan, and schedule sessions, and budget resources to reach all eligible children. Improved planning resulted in more children being reached with immunization services. In addition, many facilities began to identify and track children who had defaulted on their immunizations, increasing the number of fully immunized children. Microplanning can be used to strengthen planning and improve the reach of services, even in places with weak health infrastructure and large nomadic populations.
Samir Garg, State Health Resource Centre
Poster Number: 352

‘Jan-Samwad’ - Public Dialogue as a means of Strengthening Action on Social Determinants of Health and Promoting Health System Accountability

Co-authors: Samir Garg-State Health Resource Centre; Prabodh Nanda-State Health Resource Centre; Omprakash Barman-State Health Resource Centre; Puran Sinha-State Health Resource Centre

Background

‘Ensure healthy lives and promote well being for all at all ages’ is an important goal amongst Sustainable Development Goals (SDGs) for which the accountability belongs to the health systems. Equitable healthcare services and improved ‘Social Determinants of Health’ (SDH), both are necessary. Chhattisgarh is one of the poorest states in India with severe challenges of health and its determinants. Ensuring accountability of the health system is a challenge. The state devised a mechanism of institutionalizing ‘Jan Samwad’ (meaning Public Dialogue) to respond to this.

Method

The state organizes 140 Public Dialogues covering most of rural sub-districts. In order to understand this intervention, researchers participated in 30 of such events. Key actors were interviewed and programme Reports were reviewed.

Results

Promotion of community health-committee in each village provided platform for monitoring of healthcare services and SDH where collective-action is organised on gaps identified. Gaps remaining unresolved through local action were escalated to federations of health-committees at cluster and sub-district level. Bigger issues were identified thematically and annual Public-Discourse event at sub-district level was used as a platform for raising them. The processes were facilitated by leveraging 70,000 strong Community Health Workers (CHWs). Each Public-Discourse receives participation of around a thousand CHWs, women from local communities and members of health-committees who articulate their issues in front of elected senior politicians and government officials.

During 2016-17, around 50,000 complaints were raised in 143 events across the state. However, the platform went beyond grievance-redressal and worked for Public Accountability. Presenting sub-district reports, case studies of denial and Street-theatre along with involvement of local-media are its important components. The build-up was equally important as it involved consensus-building amongst health-committees on issues to focus. It allowed expression of public pressure to demand accountability for public-services related to healthcare as well as SDH. Gradually, it also started pointing out gaps in private healthcare and insurance programmes.

Discussion

This example from Central India demonstrates possibilities of institutionalizing Public Accountability action within framework of state funded Community Health Systems. It emerged as additional layer on other iterative approaches. Public Dialogues provide platform for interaction between communities and government and on terms set by community. Enabling contexts are necessary for replicating elements of such action but it will be a worthwhile investment for SDGs. Research and Practice of Community Health Systems needs to respond to the challenge.
Zahirah McNatt, Columbia University, Mailman School of Public Health
Poster Number: 353

City life: A qualitative exploration of health service accessibility for Syrian refugees in urban Jordan

Co-authors: Zahirah McNatt-Columbia University, Mailman School of Public Health; Muhammad Fawad-International Rescue Committee - Jordan

Background: More than 60 million people across the globe have been forced to migrate as a result of conflict, natural disaster and famine. One-third have crossed international borders and are registered as refugees. The vast majority will migrate to neighboring low-and-middle income host countries, will never be resettled in high income countries and will reside in urban centers, rather than formal camps or rural environments. As a result, the political and economic capacities of each host-country are important contributors to the refugee experience and require analysis in order to better understand where support is needed. One major concern to urban refugee communities is the host-country's ability to make healthcare accessible. Little evidence exists exploring the experience of urban based refugees in relationship to healthcare access.

Methods: We seek to conduct a cross-sectional, qualitative study to explore the healthcare access experience of Syrian refugees residing in urban settings in Jordan. The sample includes Syrian refugees who have at least one non-communicable disease diagnosis, live in an urban setting, are registered or partially registered with the UN and the government of Jordan and have not returned to a clinic in greater than one year. Data collection will include approximately 50 semi-structured in-depth interviews focused on refugee perceptions of their own health, experiences with health services, barriers to access and coping mechanisms.

Results: The study is currently being implemented in Jordan. We anticipate identifying key themes across the sample in relationship to perceptions, experience, barriers and coping mechanisms. We aim to identify issues and themes that serve as solution points for policymakers, humanitarians and managers of health systems.

Study implications: The current refugee crisis is placing extreme pressure on low-and-middle income host countries to provide access to healthcare. This study will provide host-country governments, donors and humanitarian agencies with better understanding of how refugee communities cope with and manage their healthcare needs in urban environments. In partnership, these and other entities can more comprehensively plan and respond to urban refugee healthcare needs.

Dissemination of results: Results will be disseminated in several ways including, (1) reports and presentations to NGOs, UN agencies and other concerned bodies supporting the refugee community and (2) publications for lay and professional audiences concerned about humanitarian response and forced migration.
The woes and aspirations of local health systems at national borders in East Africa: Stakeholders’ reflections on experience serving cross border communities

Background: Despite many countries working hard to attain Universal Health Coverage, health service delivery for all remains challenging for local health systems at national borders. Unlike health systems in the center, those at the peripheral are often less prioritized by policy makers. The existence of different state and territorial sovereignty makes health service delivery even more complex. The purpose of this study was to capture practical experiences around service delivery by health systems at national borders with the aim of deliberating on possible actions to advance access and coverage agenda.

Methods: We used participatory deliberative engagements to solicit views and experiences of multi-stakeholders (health managers, political leaders, border authorities, CSOs) regarding health service delivery for communities at 12 border points in East Africa. This was part of a baseline survey for a Cross Border Health project implemented in Uganda, Kenya, Tanzania and Rwanda. Deliberative meetings with 30-35 purposively selected local stakeholders from both sides of the border were held at each study site. The meetings drew from the baseline survey findings and collective experiences to identify feasible solutions to the existing health service delivery challenges at these sites. Data was analyzed using a thematic framework approach.

Results: Twelve meetings were held with over 350 stakeholders. Stakeholder reflections revealed that local health systems at national borders were running on the same resource envelope as those in the center despite the influx of clients from neighboring countries. Relatedly, the current data collection tools were silent on the nationality of clients; making it hard to quantify the non-citizens served. In many instances, the nearest referral points were in the neighboring country, making it different to access care given the variations in health financing approaches. Under chronic care; differences in patient identity, treatment protocol, and continuity of care across the border were cited as major challenges. Other disparities in; referral systems, service delivery guidelines and regulatory standards and practices were noted. These affected cross border collaborations and continuity of care across borders. Stakeholders recognized the need for taking advantage of the East African integration to advance health related cooperation. Other suggestions included; revitalizing of existing cross border health platforms, initiating service provider communication across borders, and advocacy for cross border health by political leaders.

Conclusion: In the era of leaving no one behind, local health systems at national borders should be given special attention; if they are to contribute to the UHC goal.
Assessing the processes and effectiveness of embedded implementation research for policy and program improvement: Development of a comprehensive evaluation framework

Co-authors: N. Ilona Varallyay-Consultant, Alliance for Health Policy and Systems Research

Purpose: Embedded approaches to implementation research, whereby health system decision makers and implementers participate actively in all stages of the research process, are gaining traction as innovative and effective approaches to translate knowledge for health program and policy improvement. However, the evidence base on the processes and effectiveness of such collaborative research remains inchoate. This paper presents a standardized approach to evaluate these initiatives that seeks to: identify core elements of ‘embeddedness’ in different contexts; unveil the underlying mechanisms and conditions that facilitate or inhibit the co-production of evidence; and assess the contribution of this approach in promoting evidence uptake in program decision making. Frameworks such as the one proposed here provide a cornerstone for efforts that seek to improve health system functioning to attain the global sustainable development goals.

Focus: This evaluation framework for embedded implementation research (IR) was developed based on both conceptual underpinnings drawn from the literature as well as empirical evidence from a PAHO/Alliance for Health Policy and Systems Research initiative in Latin America and the Caribbean. Since 2014, this initiative has disbursed 19 grants in the region to support researcher-decision maker teams to conduct IR for program/policy improvement. Semi-structured key informant interviews with these team members as well as with experts in the ‘evidence-to-action’ field were conducted to subject the framework to critical and informed review, thereby validating its content from both an internal as well as an external perspective. The evaluation framework highlights three stages of the overall process—research co-production; engagement with evidence; program change—and key underlying evaluation constructs. Significance: Embedded IR conducted by researcher-decision maker teams has great potential as an innovative research approach that facilitates knowledge (evidence) translation. Systematic and comprehensive evaluation of such approaches is needed to demonstrate their effectiveness as well as the conditions that enhance their success in stimulating evidence-informed decision making. Application of the evaluation framework proposed here can contribute to growing the evidence base on this approach to knowledge translation.

Target Audience: This framework will be of interest to a wide range of actors, including health research funding agencies, researchers, evaluators, policy makers or program implementers, who will be able to use this framework not only to structure and inform the evaluation of other embedded research endeavors, but also to guide the design of new models of embedded IR better suited to different contexts or funding mechanisms.
A comprehensive assessment of institutional capacity for demand and use of evidence within the ministry of public health: findings and implications from a middle-income country

Co-authors: Racha Fadlallah-American University of Beirut; Linda Matar-American University of Beirut; Fadi El-Jardali-American University of Beirut

Background: The past few years have witnessed increased global calls, urging national governments and international development agencies to invest in knowledge translation and related initiatives that bring researchers and policymakers together and promote the use of evidence in health policy decisions. While several countries have focused on strategies to strengthen the capacity of individual policymakers, sustainability of evidence-informed policymaking can only occur through strengthening the institutional capacity which requires resources, legitimacy and regulatory support from policymakers.

Objective: The objective of this study is to conduct a comprehensive assessment of institutional capacity, including systems, mechanisms, and processes in place which support demand and use of evidence within the Ministry of Public Health (MOPH) in Lebanon, a middle income country.

Methods: Data was collected using a combination of documentation review, key informant interviews and surveys. Data triangulation helped provide in-depth understanding of institutional capacity and culture within the MOPH and increased the reliability and validity of findings through cross-checking of information across different data sources.

Results: Findings revealed that, while individual policymakers highly valued the use of evidence to inform different stages of the policymaking process, the translation of this intention into practice seems to be hindered by the lack of incentives and mechanisms to prompt policymakers to act on evidence. Most of the capacity-building initiatives at the MOPH targeted the individual level, with more limited activities aimed at strengthening institutional capacity. Findings highlighted gaps and areas for improvement to ensure the necessary mechanisms and structures are in place so that evidence is systematically identified, requested, obtained and used for informing policy decisions and practice. In this presentation, we will reflect on the approach and tools used to measure institutional capacity, the detailed findings, and the implications for policy and practice.

Conclusion: Study findings will help identify opportunities for improvement and strategies that could be implemented to institutionalize evidence-informed health policymaking. We plan to scale up the work to other ministries and policymaking institutions in low- and middle-income countries across regions. This initiative is particularly relevant in the era of SDGs where evidence is at the center of efforts to support better decisions for achievement of the SDGs.
Examining Health Policy and Systems Research priority setting for control of endemic tropical diseases amongst producers of evidence in southeast Nigeria

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Background

Research priority setting is fundamental for ensuring that relevant evidence is produced and used for decision-making and that health resources are allocated efficiently. Evidence shows that aligning research priorities to policymakers’ enables evidence-based decision making. Therefore, examining health research priority setting among producers of evidence will enable better understanding of the processes involved and the factors that influence them. It will also reveal the gaps in health research priority setting that limit uptake by policymakers and practitioners in decision making.

Method

A cross-sectional study of producers of research evidence was undertaken in Enugu and Anambra states using qualitative research method. Data was collected through in-depth interviews of key informants to explore the processes of health research priority setting among producers of research evidence. Respondents were purposively selected based on their knowledge, experience, interest and active involvement in producing health policy and systems research (HPSR) evidence for control of endemic tropical diseases (ETD) in both States. Qualitative data was transcribed and coded using NVivo software. Deductive analysis of data was done.

Results and Discussion

Processes of HPSR priority setting for ETD control varied depending on individuals involved and their organizations. Approaches used ranged from population need-based enquiry to researcher-initiated and funder-driven approaches. International and intergovernmental agencies influence HPSR priority setting among producers of evidence, directly through funding HPSR projects or indirectly through setting international research priorities. These international research priorities determine the research focus of national and subnational governments. In some instances, researchers were said to have come up with HPSR priorities based on their personal interest, area of work and technical competence. Some of them also gave consideration to prevailing health problems and health research priorities of the government. However, in many cases, they had to align their priorities to where funding was available. Occasionally, they found funding opportunities that matched their personal research interests and the research priorities of government for ETD control.

Conclusion

The HPSR priorities of researchers involved in ETD research are mostly influenced by external factors such as availability of funding and international goals. The academic community and sub-national governments rarely influence the focus of research on ETDs, although there are rare occasions where funders’ interests align with researchers’ interests.
Newspaper coverage of herbal medicine risks, benefits and policies in sub-Saharan Africa: a content analysis to assess knowledge translation

Co-authors: Bernard Appiah-Texas A&M University School of Public Health; Anubhuti Poudyal-Texas A&M University School of Public Health; Isaac K Amponsah -Kwame Nkrumah University of Science & Technology Faculty of Pharmacy and Pharmaceutical Sciences; Margaret J Foster-Texas A&M University Medical Sciences Library, College Station, TX, USA; George Appiah-Centre for Science and Health Communication, Accra, Ghana

Background - The WHO African region marked 2001-2010 as the decade of African Traditional Medicine. Herbal medicine, a form of traditional medicine, is an integral part of a health system. Despite the increasingly important role of newspapers in knowledge translation of herbal medicine, it is unknown how African newspapers covered herbal medicine during and after the decade of traditional medicine. This study aims to determine the content, sources cited and formats of the articles on herbal medicine published in newspapers in sub-Saharan Africa.

Methods - Newspaper articles on herbal medicine published in the sub-Saharan region from 1 January 2001 to 31 October 2017 were systematically retrieved and analyzed from LexisNexis and Access World News Collection. Descriptive analysis and chi-square tests were conducted using SPSS 23.0.

Results - A total of 375 articles met the inclusion criteria. The primary content of the articles were benefits (41.6%), policies (36.9%) and risks (21.5%). Government officials were the most commonly cited sources (22.9%), followed by patient/patient groups (14.9%), and scientists/research institution (12.1%). The commonest article format was the latest news (43.2%). Only 8.6% of the newspaper articles cited journal articles. There was a statistically significant association between government officials as sources and newspaper reporting about benefits (p<0.001) or policy (p<0.001) but not risks (p = 0.981). Similarly, there was a statistically significant relationship between patient/patient groups as sources and newspaper reporting on benefits (p<0.05) and policy (p<0.001) but not risks (p=0.168). Newspaper articles that had scientists or research institutions cited were statistically more likely to be based on a scientific article (p<0.001), discuss risks (p<0.05), benefits (p<0.05), and policy (p<0.001).

Discussion and conclusion - Our study showed that the newspapers preferred reporting on latest news related to herbal medicine. The low proportion of newspaper articles that were based on journal articles or that cited scientists suggests that either scientists/scientific institutions were not translating their research to the public or they were underutilized sources. Because newspaper articles that had government officials or patient group were statistically not likely to report about risks, such sources may need training in risk communication associated with herbal medicine. Efforts to strengthen African health systems should include building the capacity of scientists and government officials to translate herbal medicine research to the public. Studies for exploring factors that influence herbal medicine knowledge translation in newspapers are needed to help advance health systems in actively integrating herbal medicine and conventional medicine.
Transferability of health systems interventions and strategies across settings: a case study of China and Tanzania

Co-authors: Melisa Martinez Alvarez-London School of Hygiene & Tropical Medicine; Kara Hanson-London School of Hygiene & Tropical Medicine; Yuan Huang-Sichuan University, China; Josephine Borghi-London School of Hygiene & Tropical Medicine; Carine Ronsmans-London School of Hygiene & Tropical Medicine

Purpose

Health systems research has produced an increasing body of evidence on the effectiveness of health systems interventions. A key finding of this literature is that health systems interventions cannot be seen as independent from the context in which they are delivered. However, less is known about whether and how health systems interventions can be transferred across settings, where contextual factors vary. This presentation will describe the process of synthesising lessons that can be transferred across settings.

Content

We used a systems approach to evaluate the maternal health system in rural Western China, with a view to learn how China has achieved significant progress in reducing maternal mortality and to identify lessons that may be applicable to a high-mortality sub-Saharan African context. We selected Tanzania as a case study country and used a participatory research approach to synthesise and classify the transferability of health systems lessons from rural China to Tanzania. We ran a week-long workshop in rural China with experts from Tanzania, China and the UK. Workshop activities included a series of presentations summarising the analysis of the Chinese and Tanzanian health systems, a two-day field visit to see first-hand some of the health system interactions and observe the context. A two-day structured session then explored participants’ views as to whether the key health system interventions that had been deployed in China could be transferred, classifying these as “non-transferable”, “fully transferable” and “transferable with modifications”.

Three aspects of the Tanzanian context were found to be particularly important when considering the transferability of interventions. First, whether the Tanzanian health system had the implementation capacity to undertake certain reforms. Second, the potential for adverse incentives to arise from implementing reforms. Finally, the (lack of) acceptability of interventions to different stakeholders in Tanzania.

Significance to field-building dimensions

This session will contribute to the field-building dimension of Platforms and mechanisms to share and translate knowledge in two ways. First, by outlining the process by which we explored the transferability of interventions, which is not always explicitly described in projects. Second by shining some light on the often opaque and all-encompassing concept of context. In the case of transferring maternal health system interventions from rural China to Tanzania, key contextual factors were: capacity, adverse incentives and acceptability.
Violet Murunga, University of Liverpool/African Institute for Development Policy (AFIDEP)

Poster Number: 360

Knowledge translation experiences, capacities and practices of researchers in low and middle-income countries: a structured literature review

Co-authors: Violet Ibukayo Murunga-University of Liverpool/African Institute for Development Policy (AFIDEP); Justin Pulford-Liverpool School of Tropical Medicine (LSTM); Imelda Bates-Liverpool School of Tropical Medicine (LSTM); Rose Ndakala Oronje-African Institute for Development Policy (AFIDEP)

It is argued that evidence-informed policy and practice can result in improved health and development outcomes, efficient use of limited resources and accountability. Over the past decade, numerous interventions aimed at enhancing evidence-informed decision-making (commonly referred to as Knowledge Translation or KT) in LMICs have been tested. However, most efforts have focused on understanding and addressing the barriers to KT from the perspective of policymakers. Few studies have explored these issues from the perspective of researchers. Moreover, the existing evidence-base has not been systematically synthesised. This paper seeks to improve understanding of the evidence-base on researchers’ KT experiences, capacities and practices in a LMIC context.

An electronic search for papers focusing on researchers’ KT capacities, practices or experiences, authored in English, was conducted using PubMed and Scopus and resulted in 266 screened studies of which 34 met the inclusion criteria. A narrative synthesis was used to summarise emergent themes.

Majority (23) of the papers reported on KT knowledge, attitudes, practices or experiences, some (8) assessed institutional KT capacity and a few (3) reported on interventions aimed at enhancing researchers’ KT capacity or implemented by researchers to promote evidence-informed policy and practice of target groups. The findings reveal that researchers have limited KT capacity and rarely conduct KT activities due to a range of barriers including: limited funding for conducting systematic reviews (SRs) and KT; lack of incentives promoting researchers’ KT practice and their inadequate time and technical capacity to conduct KT. Suggested facilitators of researcher KT activity include: increasing funding for the conduct of SRs and KT; sensitisation, training and mentorship of researchers and research users on KT; researchers’ interaction with research users and collaboration with them in research-, KT- and policymaking-processes; tailoring messages for various audiences and targeted dissemination of research findings. Reported KT interventions employed participatory approaches and resulted in improved knowledge or awareness of the content delivered or disseminated and to a lesser extent improve practice.

The findings confirm that there is limited published literature on researchers’ KT capacities, practices and experiences in a LMIC context. In addition, despite the increase in focus on improving KT over the past decade, researchers in LMICs have limited KT capacity and rarely practice KT due to a range of barriers. Therefore, there is a case to be made for more interventions and studies to focus on understanding and addressing the barriers to researchers’ KT efforts and improving their KT capacity.
Strategies for engaging health professionals in knowledge translation and services innovation in primary health care: insights from Brazil

Co-authors: Jorge Zepeda-University of Leeds; Tolib Mirzoev-University of Leeds; Vicky Ward-University of Leeds; Robbie Foy-University of Leeds

Background: Development, implementation and assessment of context-specific strategies for translating new knowledge into innovations in policies and practices are essential for improving performance of national health systems. Opinion leaders are local experts with credibility and influence within their social groups, and therefore they are much used in interventions to catalyse the adoption of new practices in health services. However, little is known about their roles in translating knowledge into innovations within developing countries. This presentation examines the roles of opinion leaders within the context of primary care in Brazil. Methods: Since 2010, opinion leaders were engaged in the implementation of work process innovations to improve accessibility and continuity of primary care services of Florianopolis, Brazil. Their roles included production, adaptation and early adoption of new scheduling systems and teamwork practices, and sharing their experiences in peer meetings. This on-going study uses a mixed-methods theory-driven, realist evaluation approach to analyse the roles of opinion leaders in promoting innovations within this setting. Analysis of in-depth interviews, documents, and facility administrative records is guided by specific programme theories initially developed from the literature. These theories are continuously validated and refined throughout cycles of data collection and analysis. Results: Specific programme theories can explain how opinion leaders promoted initial acceptability, adoption and sustainability of innovations. When involved in production of innovations, opinion leaders, relying on their personal relationships and mediation skills, have facilitated credibility and built trust towards the innovations, thus contributing to acceptability of the innovations. When sharing their own experiences of innovation adoption with peer practitioners, opinion leaders helped to show feasibility of the adopted innovations and therefore promoted their adoption. This may be achieved through reduction of uncertainty (if the peers agree with the innovation but are uncertain about their feasibility within the current contexts), or through highlighting gaps between newly recommended and actual practice in comparison with peers (if the peers perceive the innovation as impeding). However, demonstrating shortcomings in practice may sometimes engender defensive reactions and resistance to change if comparisons are perceived as overly judgemental. Discussion: This study advances the theoretical understanding of the crucial roles of opinion leaders in promoting healthcare innovation, and provides detailed analysis of knowledge translation strategies within a primary care context of Brazil. This presentation should be of interest to decision-makers interested in translating new knowledge into change in practices, knowledge translation researchers, and funders seeking effective ways of strengthening national health systems.
Demand-driven evaluations for decisions: novel approach to identifying research questions with policy makers and linking health researchers with evidence users for maximum relevance and impact

Co-authors: Elizabeth Alison McCarthy-Clinton Health Access Initiative; Margaret Prust-Clinton Health Access Initiative; Sandra Mudhune-Clinton Health Access Initiative; Alec Mkwamba-Clinton Health Access Initiative; Michael Penkunas-Clinton Health Access Initiative; Marta Prescott-Clinton Health Access Initiative

Purpose: The process of designing and conducting policy-relevant research is nuanced and requires an understanding of both the policy-making process and research methods to fit within that process. We will share the experiences, challenges, and successes from Rwanda, Zambia, and Zimbabwe where we have innovated to move away from business as usual in health research methods towards a process that begins with the policy question in mind and then implements right-sized research methods to answer questions in time for fast-moving political decisions.

Focus/content: We will describe four key aspects of the policy-relevant research methods we have developed as part of a DFID-funded program called Demand-Driven Evaluations for Decisions (3DE), using concrete examples from our work in HIV, malaria, reproductive health and road traffic safety.

Identifying policy-relevant research questions: We will describe the processes and tools used by the 3DE program for sourcing questions collaboratively with government partners and policymakers.

Conducting policy-relevant evaluations: We will provide examples of the methods used by researchers and policy makers to ensure research relevance, timeliness, and efficiency. This relies on innovative study designs and research methods that often include the use of available health facility data, and using mathematical models to stretch our understanding of health impact.

Using evidence to inform practice: We will share examples of how we build relationships across the health sector and engage key actors from the beginning of an idea for a research study; sharing results is thus a continuation of the evidence use process rather than the starting point.

Building research capacity among policymakers: We will share our experience with building a link between users of evidence and generators of evidence, and how we have worked to increase evidence use in decision-making.

Significance for the sub-theme area/field-building dimension of relevance: The gap between health systems research and practical decision-making persists. Much is known about what should be done to improve health outcomes, but huge gaps remain in terms of how best to introduce new drugs, diagnostics, and systems. The novelty of the 3DE program’s combination of relationship-building, political awareness, and rapid turnaround of evidence is a welcome change to the status quo. The methods we describe in this session can be adapted more broadly.

Target audience: This presentation will target researchers, program managers, and policymakers looking to refine their approach to engaging in the political process through uptake of evidence to inform decision-making.
Developing more participatory and accountable institutions for health: Identifying health system research priorities for the Sustainable Development Goal-era

Co-authors: Kerry Scott-Johns Hopkins University / independent researcher; Nasreen Jessani-Johns Hopkins University; Mary Qiu-Johns Hopkins University; Sara Bennett-Johns Hopkins University

Background

Health policy and systems research is vital to guiding global institutions, funders, policymakers, activists, and implementers in developing and enacting strategies to achieve the SDGs. Here we present the results of a multi-stage participatory process to identify priority research questions on developing more participatory and accountable institutions for health.

Methods

We conducted interviews (n=54) and focus group discussions (n=2) with policymakers from international, national, and sub-national from bodies (ministries of health and technical support institutions) across all WHO regions. These interviews and focus group discussions invited respondents to reflect on pressing challenges and current policy discussions related to health systems accountability, and to identify their pressing research needs. We then conducted an overview of published academic review papers (n=34) to determine what is broadly known about health systems accountability and to identify knowledge gaps. We extracted research questions from the policymaker interviews and focus groups (70 questions) and from the knowledge gaps identified in the overview of reviews (112 questions). These questions were combined and synthesized into 36 overarching questions. Using the online platform Codigital, we invited researchers to suggest edits to these questions and then rank them according to research importance (25 researchers participated in the refining and ranking excise).

Results

The highest priority research question was: “What political factors (e.g. the discretionary power of health providers, politicization of the health system and other political factors) mediate the adoption or effectiveness of accountability initiatives (e.g. digital technology, health committees, local media or more informal citizen actions)?” Other questions that emerged as top priority focused on the impact of accountability interventions on the health workforce, reforms that increase the effectiveness of accountability initiatives, incentives that facilitate the acceptability of accountability mechanisms among frontline healthcare providers, mechanisms to support productive interaction between stakeholders, and how to integrate citizen monitoring into health system planning and implementation.

Discussion and conclusions

The process revealed different underlying conceptions of social accountability and how best to promote it. Some researchers and policymakers focused narrowly on specific interventions, while others embraced a more systems-oriented approach to understanding accountability, the multiple forms that it can take, how these interact with each other and the importance of power and underlying social relations. The findings from this exercise identify research funding priorities and future areas for evidence production and policy engagement.
Embracing the political realities of HSS – how to apply Thinking and Working Politically in systems strengthening

Co-authors: Cindy Carlson-Malawi Health Sector Programme-TA Component, Options Consultancy Ltd

Purpose and Focus
The Malawi Health Sector Programme – TA Component (MHSP-TA) was designed by the UK Department for International Development to be responsive to a range of needs as identified in the programme Terms of Reference (ToRs). A significant body of literature on Malawi’s political economy evolution over the last 20 years is available. The resulting literature consistently highlights the fact that Malawi public services suffer from ‘isomorphic mimicry’, or the tendency to favour ‘form’ over ‘function’. TA programmes are not always sensitive to the political-economy environment they work within, often satisfied with meeting technical targets rather than fostering genuine change. We suggest that health systems focused TA must understand and act ‘politically’ to be effective. The presentation describes how MHSP-TA has applied Thinking and Working Politically (TWP), and a learning and adaptive approach, to our support for strengthening Malawi’s health system.

Content
MHSP-TA’s approach to TWP will be illustrated as follows: Using a Theory of Change to underpin the programme’s strategy and tactics for HSS;

Genuine co-creation of the priority areas for technical support with partners we work with, and joint recruitment of any needed technical assistance;

Being highly flexible and responsive to changing needs within the teams we support, dropping some areas of support in favour of others as needed and as personalities change;

Identifying, and working with, reform minded individuals so that they are enabled to move their institutions beyond ‘form’ to effective ‘function’, including supporting them to develop the evidence base they need make persuasive arguments for change;

The presentation will also touch on the effectiveness of these approaches and implications for future HSS support to countries like Malawi.

Significance
HSS and reform programmes too frequently measure success through numbers of strategies or policies written, people trained, drugs or equipment purchased etc. All of these are essential aspects of HSS but they are not sufficient to ensure sustained improvements. Furthermore, even with adaptive systems in place it can still be challenging to maintain the momentum needed to move towards sustained, improved functionality of health systems. We argue that it’s only through understanding and engaging with the political (small ‘p’) environment can genuine systems strengthening be ‘sticky’ enough to last.
Advancing health systems for all through strengthening national health research systems: an evidence synthesis

Co-authors: Stephen Hanney-Brunel University London; Lucy Kanya-Brunel University London; Subhash Pokhrel-Brunel University London

Background: The 2000 Bangkok Declaration on Health Research for Development asked: ‘How can the national health research system be integrated with the national health development plan?’ Renewed interest in adopting a systems approach to health research follows increasing recognition of both the importance of research in improving health and health equity, and the challenges of securing research funds and using them effectively. The WHO Regional Office for Europe commissioned a Health Evidence Network synthesis report to synthesize evidence on policies, interventions and tools for establishing and/or strengthening national health research systems and their effectiveness.

Methods: Detailed searches of the Council on Health Research for Development (COHRED) website and key reference lists supplemented structured searches of the Scopus database and grey literature using the Google advanced search engine. Two reviewers independently examined the 936 records and those 118 retrieved for full text review. They agreed on the 92 publications for inclusion in the synthesis.

Results: Many interventions address four national health research system (NHRS) functions identified in the WHO conceptual framework. Research priority-setting and appropriate monitoring and evaluation are part of the stewardship function and important in tackling waste and achieving the key NHRS aim of meeting health system needs. Securing finance and capacity building work best when linked to an overall strategy. For research use, knowledge translation initiatives such as WHO’s Evidence-informed Policy Network are promoted. Countries in all WHO Regions find developing a formal health research strategy helpful in integrating diverse interventions for specific functions and focus attention on the health needs of all, including Nepal, New Zealand, the Philippines and British Columbia. Partnership can be important: the West African Health Organisation and COHRED worked in partnership with countries to strengthen NHRSs following situation analyses to identify challenges. Considerable progress has been identified among countries with formal policy statements. Examples include Rwanda and England, where the health ministry has created a health research strategy with a range of policies integrating a health research system into the health system. Three surveys of African countries reveal NHRS effectiveness as highly variable, but generally increasing. Prevailing conditions influencing NHRS development include the level of resources and research capacity, political commitment and stakeholder engagement.

Discussion / conclusions: Policy considerations include developing a comprehensive strategy, conducting situation analysis, a leadership role for the health ministry, monitoring and evaluation tools that focus on the objectives of the NHRS, and partnerships for low resource countries.
**Supporting health systems decision making through a rapid evidence synthesis service in the Western Cape, South Africa.**

Co-authors: Hlengiwe moloi - Health Systems Research Unit, South African Medical Research Council, South Africa. ; Willem Odendaal - Health Systems Research Unit, South African Medical Research Council, South Africa; Department of Psychiatry, Stellenbosch University, South Africa. ; Jane Goudge - Centre for Health Policy, School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Charyln Goliath - Western Cape Department of Health, Cape Metropol District, Cape Town, South Africa; Karen Daniels - Health Systems Research Unit, South African Medical Research Council, South Africa; Health Policy and Systems Division, School of Public Health and Family Medicine, University of Cape Town, South Africa

**Background**

Health for All through universal health care does not only mean access to care for all, it also means access to good quality care. Health systems decision making for high quality care, can be enhanced through decision makers ability to quickly access synthesised research evidence. A well-functioning rapid evidence synthesis service can provide such evidence. Yet, while some HICs have sophisticated rapid synthesis services, such services are rare in many LMIC settings. In this presentation, we will describe the establishment of a rapid evidence synthesis service for health policy and systems questions in South Africa.

**Methods**

We initiated our services by skilling ourselves in rapid evidence synthesis approaches, as well as piloting the service with select health systems managers. We engaged these managers from the start of the project, by inviting them to our training, so that they too could fully understand the service. Then we directly engaged with managers to understand what urgent health systems’ decisions they have to make, and how we can support their decision making through producing rapid evidence syntheses. Our focus in eliciting topics for rapid review, has been on urgent priority implementation questions at district level.

**Results**

Establishing the service has turned out to be more complex than we expected. Although we understood that the intention was to produce products rapidly, our commitment to producing a “perfect” product, delayed the timing of our first outputs considerably. This caused some anxiety around whether we had failed in our responsiveness to our knowledge user. We were also concerned that we had not engaged sufficiently in the negotiation process around the question, and thus were unsure as to whether the final product would be useful. Based on these lessons, in responding to subsequent requests, we have decided that the most senior members of our team will engage in active negotiation of the question, setting clear perimeters around what we can answer and what we cannot. We have also begun seeing our engagement as a conversation, in which we start with a rapidly produced policy brief, annotated bibliography, or evidence map. This then becomes the basis from which we negotiate our continued engagement, with the intention of producing a rapidly conducted review as an end product.

**Conclusion**

Through our engagement we are learning to balance methodological perfection with a responsiveness to stakeholders’ urgent needs.
True Cost of Choice: A policy analysis on abortion cost burdens in Government facilities in Madhya Pradesh, India

Co-authors: Aparna Ananthakrishnan - London School of Hygiene and Tropical Medicine

Background: Concerns of rising out of pocket payments within India’s fragmented health system is well documented, with evidence suggesting that these catastrophic expenditures often drive families into poverty. Reproductive health services reveal similar expenditure patterns. For instance, despite a relatively liberal abortion policy, unaffordability of services offers few women the opportunity to seek specialized abortion care. To achieve the third and fourth Sustainable Development Goals (SDGs) of building resilient, gender-inclusive health systems and improving well-being, the crucial issue of affordability must be fully addressed.

Methods: Average total user costs of obtaining abortion services for 220 patients using government facilities in Madhya Pradesh, India, were calculated, based on estimates of medical (treatment) and non-medical cost pre-collected by the Population Council India and Guttmacher Foundation. These expenditures included transport to and from the facility, food and refreshments, doctor fees and medicines, lab tests and tips paid to staff. Details on asset ownership, previous reproductive health history have also been included. An in-depth policy review on abortion laws and frameworks around the country, from case studies, policy documents, peer-reviewed research and other grey literature sources has been included to complement the statistical analysis.

Results: Average total cost of an abortion in Madhya Pradesh was Rs.710 ($11.5), with non medical costs, on average, higher than treatment costs. OOP burdens were highest amongst those most vulnerable - the poorest and those younger than 20 years of age. Surgical methods were widely used in abortion cases, with majority using the invasive dilatation and curettage (D&C) method, requiring longer facility stay post-procedure. Few used contraception during the time of conception and a minority were offered family planning options post-abortion. Although intangible cost calculations have been excluded, time cost estimates was highest among those most poor, who spent longer reaching the facility and staying there, as compared to the richest cohort.

Discussion: User costs, medical and non-medical, are crucial demand-side factors, negatively impacting reproductive health seeking among women and their families. Hence, increasing uptake of less surgically invasive abortive procedures is beneficial, as they lower treatment costs as well as inpatient facility time, therefore lowering medical, non-medical and intangible costs burdens. Health financing methods should expand coverage to non-medical expenditure, such as transport and facility costs, which fall inequitably on the vulnerable. Primarily, a variety of contraception methods should be widely accessible and affordable within the government health system, improving the quality of life for women and their partners.
Who pays and how much? A cross-sectional study of out-of-pocket payment for modern contraception in Kenya

Co-authors: Emma Radovich-London School of Hygiene & Tropical Medicine; Mardieh L. Dennis-London School of Hygiene & Tropical Medicine; Edwine Barasa-KEMRI-Wellcome Trust Research Programme; Francesca Cavallaro-London School of Hygiene & Tropical Medicine; Kerry L.M. Wong-London School of Hygiene & Tropical Medicine; Josephine Borghi-London School of Hygiene & Tropical Medicine; Mark Lyons-Amos-London School of Hygiene & Tropical Medicine; Edwine Barasa-KEMRI-Wellcome Trust Research Programme; Francesca Cavallaro-London School of Hygiene & Tropical Medicine; Timothy Abuya-Population Council Nairobi; Lenka Benova-London School of Hygiene & Tropical Medicine

Background

Out-of-pocket (OOP) payment for modern contraception is an under-studied component of healthcare financing in countries like Kenya, where steep wealth gradients in met need have prompted efforts to expand free contraceptive access. This study aims to examine whether the poor are more likely to receive free contraception at public sector providers and to compare how OOP payment for injectables and implants—the two most popular methods—differs by public and private sector provider types and user's socio-demographic characteristics.

Methods

We used the Kenya 2014 Demographic & Health Survey to examine respondent's self-reported source and OOP payment to obtain their current modern contraceptive method. We used multivariable logistic regression to examine predictors of free public sector contraception and compared average expenditure for injectable and implant to users accessing public and private sector providers. Quintile ratios examined progressivity of non-zero expenditure by wealth.

Results

Half of users of public sector providers reported free contraception; this varied considerably by method and region. Users of implants, condoms, pills and IUDs were all more likely to report receiving their method for free (p<0.01) compared to injectable users. The poorest were as likely to pay for contraception as the wealthiest users at public primary care providers (OR: 1.10, 95% CI: 0.64-1.91). Across all provider sectors, among users with non-zero expenditure, injectable and implant users reported a mean OOP payment of KES 80 (US $0.91), 95% CI: KES 78-82 and KES 378 (US $4.31), 95% CI: KES 327-429, respectively. In the public sector, expenditure was pro-poor for injectable users yet weakly pro-rich for implant users.

Discussion

Kenya's wealthiest contraceptive users utilised a greater mix of modern methods and providers compared to the poorest users, and use of non-public providers increased with increasing wealth. Despite Kenya's national policy to offer free public sector family planning services, only half of users reported obtaining their method at no cost. A way of exempting the poor from payment is a core component of an equitable system of user fees for healthcare, yet our findings highlight that the poorest contraceptive users are as likely to pay for family planning services from public sector providers as wealthier users. Understanding sub-national implementation of national family planning policy is needed to ensure fair contraceptive access and preserve uneven gains in meeting demand for modern contraception. Greater attention is needed to the targeting of free family planning services to the poorest users.
Implementing human papillomavirus vaccine in Mozambique: A mixed-methods partnership evaluation

Co-authors: Caroline Soi - University of Washington; Jessica Shearer - PATH; Baltazar Chilundo - Universidade Eduardo Mondlane; Vasco Muchanga - Universidade Eduardo Mondlane; Luisa Matsinhe - Health Alliance International Mozambique; Sarah Gimbel - University of Washington; Kenneth Sherr - University of Washington

Background

Gavi, the Vaccine Alliance, is a Global Health Partnership whose model is based on the reliance of domestic and international partners to support implementation of immunization activities under its Partnership Engagement Framework mechanism. We applied the Gavi Full Country Evaluation (FCE) partnership framework to test the contribution of network structure on the added value of the Mozambique HPV vaccine demonstration phase partnership.

Methods

Mixed methods were utilized to measure five partnership dimensions. Qualitative tools described the contextual factors and prerequisites, partner performance and practices; social network analysis (SNA) the partnership structure, and a survey measured the perceived added-value in the form of effectiveness, efficiency and country ownership. Forty key informant interviews were conducted with frontline ministry of health workers, ministry of education staff and supporting partner organization members with 34 of these additionally responding to the social network and perceived outcomes surveys.

Results

SNA measures for partnership structure corroborated the perceived outcome survey results. They revealed a partnership network characterized by high overall connectivity scores of reachability 100% and average distance 2.5, features that are favorable for rapid and widespread diffusion of information necessary for engaging and handling multiple implementation scales. High SNA effectiveness and efficiency measures for structural holes (85%) and low redundancy (30%) coupled with high mean perceived effectiveness (97.6%) and efficiency (79.5%) outcome scores were observed. Additionally, the tie strength average score of 4.056 on a scale of 5 denoted high professional trust. These are all markers of a partnership where disparate institutions and organizations worked in a collaborative environment in which the comparative advantage that each entity had to offer was leveraged. Lower perceived outcome scores for country ownership (24%) were found with the challenges of working with out-of-country partners being prominently cited by study participants as reasons.

Conclusions

While there is room for improvement on the country ownership aspects of the partnership, the expanded, diverse and inclusive collaboration of institutions and organizations that implemented the Mozambique HPV vaccine demonstration project was effective and efficient and we recommend that the country adapt a similar model during the national scale up.
Katia Peterson, In-Situ Research
Poster Number: 370

An Evaluation of Community Based Interpersonal Group Psychotherapy (IPT-G) in Three Ugandan Communities: Results From a 2017 Study

Co-authors: Katia M Peterson-In-Situ Research; Hongyun Fu-Eastern Virginia Medical School ; Kari Frame-StrongMinds; Sean Mayberry-StrongMinds

Background: The World Health Organization estimates that 320 million people suffer from depression with the highest prevalence among African women (6%). In Uganda depressive disorders account for 10.5% of Total Years Lived with Disability—(YLD)—the highest percentage among all African countries. StrongMinds is the only organization in Africa solely focused on improving the mental health of women through community led treatment. StrongMinds implements Interpersonal Group Psychotherapy (IPT-G) that is led by community based Mental Health Facilitators (MHFs) at the population level. Given the paucity of rigorous evaluations of mental health interventions in the developing world, let alone at scale, makes the results from this study of significant importance.

Methods: In 2017 StrongMinds sampled 866 patients from three treatment sites: Kampala (n=323), Mukono (n=293), and Iganga (n=250) (N=2400). Women were screened for depression using the PHQ-9 and patient interviews. Total PHQ-9 scores can range from 0-27 with higher scores indicating more severe depression. Inclusion for treatment is a PHQ-9 score of greater than or equal to 10 (“moderate depression” or greater). In-Situ Research, an external research firm, conducted the evaluation. The average group size was 12 women and led by one MHF. Groups met for 60-90 minutes once a week over 12 weeks. Depression symptoms were measured with the PHQ-9 at baseline, midline, endline, and post-assessment (two weeks after endline). Linear mixed-effects models were used to estimate the effect of intervention on patient outcomes, taking into account between and within subject differences, and correlation between pre- and post-depression scores (80% power, 95% confidence interval, p<0.05).

Results: The average baseline score was 15 (“moderate depression”). Between baseline and midline average scores decreased eight points (p&lt;0.001). The average score change between baseline and post-assessment was 12 points (p &lt; 0.001). At post-assessment the average patient score was four (“minimal” to no depression). These findings are consistent with results from smaller 2016 cohorts (post-assessment scores among 2016 cohorts were maintained at 6-month follow-up).

Conclusion: The increasing urgency to implement—and evaluate—community based depression treatment models at scale cannot be overstated. Results from this evaluation demonstrate—with great confidence—that IPT-G is an effective community based treatment model. The unique contribution of this study is the reliability of the findings due to a large sample size and robust analysis method. The simplicity and scalability of IPT-G coupled with reliable evidence has made IPT-G an attractive treatment model for other communities.
Meet the unmet needs: Addressing the equity and the access to mental health services via a community based psychosocial capacity building project in post-earthquake Nepal

Co-authors: Shang-Ju Li-Americares Foundation; Tara Leytham-Powell-University of Illinios; Chloe Ettari-Americares Foundation; Niva Shakya-Americares Nepal; Yuan Hsiao-University of Washington

Introduction

The 2015 earthquake that struck Nepal caused unprecedented damage to the country. In addition to widespread destruction, the death toll reached 8,702 and resulted in 22,303 injuries. The psychological impact of a disaster such as the Nepal earthquake can last months and years. Symptoms of post-traumatic stress, anxiety, and depression often remain high for individuals who do not have support and who were highly exposed to the disaster. In Nepal, like many low or middle-income countries, the mental health system is weak and those who live in remote areas often do not have access to services. To address the gap in mental health services, the Community-Based Psychosocial Capacity Building Project was designed to address the mental health needs of the community in post-disaster Nepal. The project consisted of two distinct but interrelated components: a training package for health workers and 'forum theatre' geared towards increasing awareness on psychosocial issues and MHPSS needs.

Methods

The quasi-experimental mixed-method study examined the impact of the program in three districts. Surveys were collected at three time points. The villages were randomly selected in to the intervention and waitlist-control group. The Difference in Difference method compared intervention and waitlist control groups to examine changes between groups in perception of the healthcare and mental health system, depression, anxiety, post-traumatic stress, resilience, and perceived social connectedness over time. The impact of the intervention on the indicator was assessed using Linear Random Effect Model.

Results

Findings illustrated depression and anxiety levels significantly (p<.05) decreased for those in the intervention group compared to the control condition. No significant changes were found in resilience and perceived social support between groups. Discussion on mental health and psychosocial issues in the communities in the intervention group increased by 45.77%, and trained health workers who took part in pre-and-post-test surveys illustrated a 65% knowledge increase.

Conclusion

There is a dearth of research examining the use of community education after a disaster to reduce psychosocial distress. This research provides valuable information of how a community-based intervention can increase mental health awareness and knowledge among the most vulnerable populations and community health workers. Future post-disaster interventions should continue to examine how to culturally relevant post-disaster mental health awareness interventions may support communities and healthcare system affected by disasters to understand the mechanisms for mental health recovery.
Community health worker-delivered counselling for common mental disorders among chronic disease patients in South Africa: a feasibility study

Co-authors: Bronwyn Myers-South African Medical Research Council; Crick Lund-University of Cape Town; Carl Lombard-South African Medical Research Council; John Joska-University of Cape Town; Naomi Levitt-University of Cape Town; Tracey Naledi-Western Cape Department of Health; Chris Butler-Oxford University; Dan Stein-University of Cape Town; Katherine Sorsdahl-University of Cape Town

Background: Two approaches to community health worker (CHW)-delivered mental health counseling for chronic disease patients have been proposed: a “designated” approach (where CHWs in the chronic disease team are designated to deliver counseling in addition to their other duties) and a “dedicated” approach (where additional CHWs are added to the chronic disease team to deliver this service). This study assesses the feasibility and acceptability of these approaches to CHW-delivered mental health counseling in order to inform the design of a randomized controlled trial (RCT).

Methods: Four primary health care facilities in the Western Cape province of South Africa were allocated to either “dedicated” or “designated” CHW-delivered counseling and stratified by urban/rural status. At each facility, 10 chronic disease patients reporting hazardous alcohol use or depression (five with HIV, five with diabetes) were recruited and offered three sessions of motivational interviewing and problem-solving therapy. Participants completed a baseline questionnaire, which was re-administered one month after counseling completion. We assessed feasibility and acceptability of these counseling approaches and protocols to be used for a future RCT by evaluating study processes (proportion of patients who were willing to be screened, met inclusion criteria, provided consent, completed counseling, and were retained in the study) and through qualitative interviews of CHWs who delivered the intervention.

Results: Overall, 262 chronic disease patients were referred for screening, of which 193 (74%) agreed to be screened and 101 (52%) met eligibility criteria. Of the eligible patients, 67 (66%) were interested in receiving counseling, of which 40 were enrolled. Patients who screened positive for depression were more likely to be interested in counseling than those with hazardous alcohol only. Attrition from the counseling program (n = 6; 15%) and the study was low (n= 4; 10%). Recruitment and retention did not differ between the designated and dedicated sites. Dedicated and designated CHWs noted feasibility and acceptability of the counseling package. They recommended some changes to the training and implementation protocols to enhance feasibility of counseling delivery.

Conclusions: It is feasible and acceptable for either “dedicated” or “designated” CHWs to deliver mental health counseling to chronic disease patients in a low-and middle-income country setting. Consequently an effectiveness RCT is justified, with some adjustments to the training and implementation protocols in order to provide further support to CHWs.
Xiaocong Yang, GUANGZHOU UNIVERSITY
Poster Number: 373

SOCIAL CAPITAL AND COGNITIVE ABILITY AMONG OLDER ADULTS IN CHINA: A MATCHING VIEW

Co-authors: XIAOCONG YANG-GUANGZHOU UNIVERSITY; Tan Chen-GUANGZHOU UNIVERSITY; CHENGXIANG TANG-GUANGZHOU UNIVERSITY; FIONA CARMICHAEL-UNIVERSITY OF BIRMINGHAM

We use the China Health and Retirement Longitudinal Study (CHARLS) to investigate the relationship between social capital and the cognitive ability of older adults. The analysis uses Propensity Score Matching and Difference-in-Differences to address potential sample selection bias and endogeneity. The treatment variable is an indicator of individual-level, structural social capital measured by participation in social interaction. Cognitive ability status is measured by memory recall and cognitive ability. We find that social capital has a positive impact on cognitive ability. The results also suggest that amenity investment in a community can increase older adults’ chances of taking part in social interaction and thus acquiring more social capital. These findings indicate that social capital is an important determinant of older people’s cognitive ability. By implication, the local community could improve the cognitive ability of the older population by encouraging them to participate in social activities and supporting the development of community amenities.
"I Know Some People": the Impact of Social Capital on Primary Health Care Utilization of Residents in China

Co-authors: Xiaoyu Xi-China Pharmaceutical University; Weiwui Zhang-China Pharmaceutical University; Cancan Yuan-China Pharmaceutical University; Yuankai Huang-China Pharmaceutical University

Background: Social Capital is an important social factor to affect the efficiency of residents' utilization of health services. In China, primary healthcare services cannot be used effectively mainly due to the unbalanced distributions of medical resources and patients. Therefore, this empirical research focused on the relationships between social capital and primary healthcare service (PHCS) utilization. This study is conducive to defining the individual and contextual social factors that affect the utilization of health services and provides new insights of the design of policy research and community interventions so as to improve Chinese health accessibility.

Objectives: To explore the impact of individual and community social capital on the utilization of PHCS respectively, as well as the interactions between the two types of social capital on the dependent variable.

Methods: The final sample included 3030 residents of 202 communities in Hangzhou, China during 2017. A face-to-face interview for each participant was conducted with a structured, pre-coded, and pre-tested questionnaire, including the proxy indicators of social capital, measured by Trust Scale score and community residents' PHCS services utilization, measured by the question "How many times have you ever visited community health service institutions (CHISs) in 2017?". A multi-level model was used to analyze the influences of individual social capital (ISC) and community social capital (CSC) on the utilization of PHCS. Four linear models of mixed effects were fitted and ISC variables, CSC variables and demographics variables were added one by one. All data were collected by SPSS 24.0 and analyzed by a logistic regression model.

Results: Results indicated that in China both individual- and contextual-level social capital were associated with the PHCS utilization, and the utilization of PHCS varied according to different levels of social capital. Usually, high CSC would increase the number of visits to CHISs and high ISC would decrease the number of visits to CHISs. However, in communities with high social capital, high ISC would increase the number of visits to CHISs. In demographics, age had no effect on the relationships between social capital and CHISs.

Conclusion: In China, different levels of ISC and CSC affect the utilization of PHCS interactively. Stronger CSC will be beneficial to residents' utilization of primary healthcare services. A higher level of ISC may only play an active role in communities with higher social capital.
Vaishali Zararia, SAHAJ
Poster Number: 375

Enabling Community Action for Maternal Health in Gujarat, India: A Photo Story

Co-authors: Vaishali Zararia-SAHAJ; Renu Khanna-SAHAJ; Sophie Marsden-Institute of Development Studies

Background: This photostory is about a collaborative project between three non-governmental organizations (NGOs) - SAHAJ, ANANDI and KSSS[i] to promote community action and social accountability for government based maternal health services in three rural and/or tribal[ii] districts of Gujarat, India that initiated in 2012 and ends in 2018.

Method: The photostory shows how stakeholders – pregnant and lactating women, their families, leaders of local women’s collectives, healthcare providers, village elected leaders from 45 project villages covering a population of more than 260,000 people were involved throughout the project. They were involved in developing and using culturally appropriate visual aids and effective monitoring tools to increase understanding of maternal health entitlements, issues, and service delivery; monitor quality of these services; and make maternal health a community issue.

Results: The efforts resulted in increased responsiveness of the health providers, improved health services, increased community participation in maternal health care including maternal death reporting and reviews; and improvements in village level determinants of health eg. water access, street lights and road facilities to reduce stress on pregnant women; birth and emergency preparedness. Winning the support of the government healthcare system at the local level was a major achievement.

Lessons: Participatory processes of developing consensus around problems, framing entitlements, and developing tools take time, but reap deep dividends. While the entire process has been community driven with the NGOs working as facilitators and encouraging community leaders to take issues forward, in contexts where suitable NGOs are not present, how can this be done?

Conclusion: The achievements in improved services and facilities for maternal health care were made possible through multi-stakeholder and multi-level engagement within the health system, and an adaptive, long-term approach to change within the communities.

[i]Society for Alternate Health (SAHAJ), Area Networking and Development Initiatives (ANANDI) and Kaira Social Service Society (KSSS)

[ii]Indian society has been broadly divided into tribal, rural and urban society based on the geographical surroundings and socio-cultural characteristics. Tribal areas comprise a substantial indigenous minority or ethnic minorities as a community. These tribes have their own culture, religion, language and strong ethnic identity. Rural societies are village societies that lives in villages where agriculture and its allied activities is the predominant occupation and way of life. Here the role of lineage and caste is of importance as is the strong attachment to their past.
Exploring the association between sick child care utilization and health service facility quality in Malawi


Background

Increasing basic healthcare access in low-and-middle-income countries to enhance child survival is not enough to meet Sustainable Development Goals 3 in high-mortality settings, where inconsistent healthcare utilization and poor quality of care may undermine the benefits of health system access. We assess whether the quality of sick child care in Malawi is linked to reduced utilization of essential services.

Methods

We defined two measures of quality of sick-child care: facility structural readiness and process of care, following WHO guidelines and using data from the 2013 Malawi Service Provision Assessment. We extracted demographic and health data from the 2013 Malawi MDG Endline Survey of households and linked households to facilities using geocodes to identify the nearest facility. We used logistic regression to examine the association of facility quality with the utilization of formal health services for sick children under 5, controlling for demographic and socioeconomic characteristics.

Results

568 facilities were linked with 12,258 children with recent illness symptoms, 56% of whom had been brought to a health facility. Facilities showed gaps in structural quality (68% readiness) and major deficiencies in process quality (28%), for an overall quality score of 44%. Utilization of sick child care services was consistently associated with facility quality (Adjusted OR [AOR] 2.06, SE 0.46). Both structural (AOR=1.44, SE 0.21) and process quality (AOR=1.42, SE 0.26) measures were associated with higher odds of care seeking.

Conclusion

Although Malawi’s health facilities for curative child care are widely available, quality of care is inadequate; children were more likely to be brought to health facilities where better care is available. Improved structural and process quality could drive households to utilize care services more consistently. Quality of health services for children must be strengthened to improve sick child care service utilization which would ultimately contribute to reducing preventable childhood disease and death.
What’s the Connection? Community Social Capital and Utilization of Cardiovascular Health Services in Indonesia

Co-authors: Adenantera Dwicaksono-Institut Teknologi Bandung; Ashley M Fox-University at Albany-State University of New York

Background: Like many emerging economies, Indonesia is in the midst of an epidemiologic transition and is struggling to anticipate the growing burden of non-communicable diseases, particularly cardiovascular diseases (CVD), despite persisting unequal access to health care. In the context of a resource constrained environment, social capital has long been recognized as an important predictor of improved health outcomes though the mechanisms remain ill-understood. Our study aimed at contributing to the literature by examining how community social capital affects the utilization of CVD related care in a population with high risks of CVD in Indonesia and identifying what form of social capital mattered most.

Methods: Using the Indonesia two waves of Indonesia Family Life Survey 2007 & 2014 we used multilevel logistic regression models to determine if a person with high risk of CVD has a higher chance of receiving CVD related treatments if he or she lived in a community with a higher level of social capital. Community members were defined as high risk of CVD if they were 40 years of age or older with high risk of CVD in 2007 and were still alive in 2014. We constructed a community social capital index that was composed of community participation, community trust, political participation, religious trust and tolerance dimension.

Results: We found that the odds of a person with elevated risks of CVD had received blood pressure, blood sugar, cholesterol level, or electrocardiography examinations was higher if he or she lived in a community with a higher level of social capital index (OR= 1.028 , CI 95%: 1.001, 1.057). Social capital does not seem to have significant effects on the odds of a person with high risks of CVD to receive CVD related diagnoses and treatments. Possession of health insurance or benefits was consistently associated with higher odds of utilizing CVD related care in all outcomes measured irrespective of area social capital.

Conclusion: The findings showed that community social capital may contribute to the public health system by facilitating community preventive health efforts. However, the finding also suggest that health insurance coverage is a stronger predictor of accessing needed health care diagnoses and treatments for chronic conditions, highlighting the needs for interventions from the health system to improve access and utilization of CVD care.
Resource allocation and utilization in the health and education sectors of Ghana: challenges and opportunities

Co-authors: Yoriko Nakamura-Results for Development; Heather Cogswell; Kojo Asante-Center for Democratic Development Ghana; Daniel Harris-Overseas Development Institute; Mohammed Awal-Center for Democratic Development Ghana; Gordon Abekah-Nkurumah-University of Ghana Business School; Ross Herbert-US Agency for International Development; Rubama Ahmed-US Agency for International Development; Ishrat Husain-US Agency for International Development; Andrew Won-Abt Associates; Tesfaye Dereje-Abt Associates; Chris Atim-Results for Development; Grace Chee-Results for Development

Background: Sub-Saharan Africa is undergoing a significant socio-demographic transformation. To realize the potential inherent in these changes, access to well-governed and quality public services is important for economic growth and stability. Ghana is at the forefront of this transition, and is working to mobilize sustainable and sufficient domestic resources to cover the increasing demand for social services. Although solutions for improving domestic resource mobilization (DRM) are known, the practicalities of implementing and advancing reforms remain a challenge. This study examines the complex political economy landscape in Ghana and explores the constraints and opportunities for DRM in health and education.

Methods: The study analyzed primary and secondary data using a political economy approach. This included semi-structured interviews with finance, education, and health actors, along with analyses of government expenditure trends across sectors and a literature review of the political economy of health and education, as well as the national budget process.

Results: Public commitment to health and education exists in Ghana, but the electorate still favors ‘free’ services, which may not be a financially sustainable option. Political motivations influence resource allocation in both sectors, as observed through biases for funding emoluments and visible outputs to garner support. Allocative processes external to formal budget processes (e.g., earmarked funds) also complicates the oversight of resource allocation decisions. Some resource allocation practices do differ between the sectors. Notably, health facilities rely more on discretionary funding, creating local discretion that does not exist in education. Differences in service characteristics – including information asymmetries, predictability, frequency, and variability – also affect the ability of users to exert power over resource allocation decisions.

Discussion: To build sustainable health and education systems, Ghana needs to strategically navigate the political dynamics that have contributed to its DRM challenges, particularly in health, which is facing pressure to improve the financial sustainability of the National Health Insurance Scheme. Sector-specific, technical resource allocation issues should be considered within a macro-economic and political context to link technical insights with political savvy and to engage a range of actors within and across sectors. Identifying overlapping interest areas between health and education may catalyze cross-sector interest coalitions and create opportunities for ‘issue bundling’ (i.e. combining issues into a single political deal). Taking such approaches may build support for technically sound, politically feasible reforms, and contribute to a fiscal contract that supports sustainable relationships between citizens and state, while providing quality public services for all Ghanaians.
Supervising Community Health Workers through Mobile Applications in Bangladesh

Co-authors: Suman Kanti Chowdhury-icddr,b; Md Humayun Kabir-MEASURE Evaluation; Gabriela Maria Escudero-MEASURE Evaluation; Mohammad Golam Kibria-MEASURE Evaluation; Shams El Arifeen-icddr.b

Purpose

A functioning public healthcare service is essential for low- and middle-income countries (LMICs) to achieve universal health coverage, in line with the Sustainable Development Goal for health. Improving health systems requires a robust health information system. Bangladesh seeks comprehensive automation of the business processes of community health workers (CHWs) and their supervisors. To that end, it is developing tools to increase supervisors’ capacity to monitor CHWs and improve how CHWs manage their responsibilities.

Contents

The Ministry of Health and Family Welfare (MOHFW), Government of Bangladesh, is gradually scaling up an electronic routine health information system (RHIS), called eMIS initiatives, based on a successful implementation in two districts. This included converting paper registers into eRegisters, distributing handheld devices, and building capacity of health staff. The Directorate General of Family Planning under MOHFW has overseen the digitization of registers used by the family welfare assistants (FWAs), a domiciliary cadre of CHWs. Countrywide, there are 23,500 FWAs. They are supervised by about 4,500 family planning inspectors (FPIs). The FWAs are responsible for providing family planning services and collecting data on family planning, maternal, child, and adolescent health in their catchment areas. The FWAs prepare a report each month, which is aggregated for national reporting.

FWAs are required to submit an advance workplan (AWP) for the following month to the FPIs. This can now be submitted online through the FWA eRegisters. FPIs review, modify, and/or approve the AWP using the FPI eSupervision system—an Android application (app). It has increased the timeliness of AWP submission and flags non-submission. FPIs can now effectively plan supervisory visits to households or satellite clinics, based on the AWP of each FWA. FWAs provide daily input on their work status, which enhances monitoring. The app also helps FPIs to prepare their own AWP, incorporating supervisory work. The app is vertically integrated with the sub-district and district managers, who can use dashboards for monitoring. Currently, 824 FWAs are submitting their AWPs to 171 FPIs in 2 districts. Scale-up of eMIS has started and will increase the coverage and digital foothold.

Significance

Accountability of service providers features prominently in the 5-point Action Plan on Measurement and Accountability for Health. The eSupervision system demonstrates how an existing system can be reoriented to improve management functions and increase accountability, paving the way for better service delivery by the health workforce.
Using crowdsourcing to estimate populations in communities

Co-authors: Adnan Ahmad Khan-Research and Development Solutions; Ayesha Khan-Akhter Hameed Khan Resource Centre; Safoora Tariq Malik-Research and Development Solutions

Background:

Key denominators for public health assessments such as area populations, number of health facilities or providers etc. are often unavailable in developing countries. While developing an urban laboratory in Dhok Hassu, an urban slum in Rawalpindi, Pakistan, health and civil officials felt that the area population was 60-70,000, last census was in 1998. We estimated area population (and the number of healthcare providers) using crowdsourcing.

Crowdsourcing works well for shared knowledge, in well-defined settings and when informants cannot confer among themselves. While individual estimates can vary considerably, group estimates are supposedly more accurate. We have found few applications in public health or epidemiology.

Methods:

We divided the area into 1040 "spots" that corresponded to approximately 50-60 meters of street. In 605 (approximately two-third) randomly selected spots, we asked local informants (pedestrians, household people, shopkeepers etc.) how many houses were there and how many people lived there. We also conducted a census in 100 (10%) of randomly selected spots. Interviewers specifically asked informants to limit their estimates to the spot. Informants gave their highest and lowest estimates. 5+ informants were chosen for each spot. Median of all low estimates per spot and that of all high estimates were taken and then averaged for the estimated population for the spot. The entire field work took approximately 8-9 days.

Results:

Crowd sourced population was 19,255 vs. the census population 18,119 (Difference 6.9%, although in 49% of spots, the variation as &gt;50%) in the hundred spots where both were conducted. Extrapolating this to the entire area, the total population estimate is 134,699 for the 605 spots where estimation was conducted and 232,663 for the entire area. We could also estimate populations for individual neighbourhoods (although a larger variation would be expected).

For healthcare providers, 73 private practitioners were identified in the locality and all were confirmed with an actual visit where a survey was also administered.

Conclusions:

The large individual informant or spot variation and the much smaller overall variation is consistent with known literature.

Crowdsourcing is very useful and reasonably accurate for public health estimates and in arriving at a denominator for assessments where resources, conflicts, time or other constraints limit a more formal census.

Robustness of the estimates may be improved with the use of stringent condition for spot definition, using geomapping technology to identify consistent and reproducible spots and locations and by ensuring that informant are locals.
Harnessing mobile phone technology to create mechanism to engage citizens in monitoring the quality and availability of health services in Tanzania’s Kishapu District

Co-authors: Marianna Balampama-Palladium; Rebecca Mbuya-Brown-Palladium; Sindri Kinnier-Palladium; Clement Marcel-Palladium

Purpose: This presentation shares experiences and lessons learnt from design and rollout of an SMS-based system to enable citizens in rural Tanzania to provide feedback on the quality and availability of health services at community level.

Focus: Mobile technology has potential to strengthen community health systems—enabling citizens to become active participants in monitoring health services, increasing accountability and transparency, and establishing norms of citizen involvement. Citizen feedback also has the potential to help ministries of health validate service data reported from facility and subnational levels, identifying discrepancies and spotting deficiencies.

We will describe the process of designing the Sauti Yangu (“My Voice”) system and rolling it out in all 53 health facilities in Tanzania’s Kishapu District. HP+ trained 191 community health workers, 124 village executives, and 24 ward executives in the system’s use; and created an online guided user interface offering user-friendly dashboards, analytics, and data visualizations to enable decision makers at all levels to use citizen feedback to improve health service provision. This enabled government to collect citizen feedback swiftly, easily, and accurately, and demonstrated the relative ease with which citizen engagement can be incorporated into ongoing data collection efforts—a conclusion strengthened by the health ministry’s decision to incorporate lessons learned from Sauti Yangu into its new unified citizen feedback collection system.

Significance for Sub-Theme: Sauti Yangu demonstrates citizen feedback mechanisms can use mobile technology to increase the visibility of community-level health systems, enabling feedback from community level to reach decision makers at higher levels. This experience offers useful lessons learned that can be drawn on by other countries seeking to design similar systems. For example:

• How greater civil society involvement could strengthen the approach.

• There is a need to strengthen the “feedback loop”—ensuring that decision-makers communicate findings and action being taken back to the community. Over time, a non-existent feedback loop may lead to lower response rates and may even discourage citizens from participating in similar initiatives. The most effective solution is likely to be institutionalized.

• There is a need to further explore barriers keeping citizens from providing feedback. Barriers identified included limited literacy; fear feedback could result in dismissal of health workers, reducing access to services; concerns about confidentiality.

• Gender disparities in phone ownership and literacy could restrict women’s ability to use the system.

Target Audience: Health system stakeholders in LMICs, including policy makers, ministries of health, and M&E officers, as well as software developers, data analysts, and researchers.
Examining cooperation, completion, and refusal rates for mobile phone surveys measuring NCD risk factors in LMICs: a collaboration between researchers and the private sector

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Background: The high penetration and use of mobile phones in low- and middle-income countries (LMICs) creates an opportunity to not only examine their use in health surveillance data collection but also develop multi-sectoral collaborations for health. As opposed to relying on traditional household surveys, mobile phone surveys could be deployed through in-country information, communication, technology (ICT) infrastructure, allowing for more frequent data collection, in real-time. To this end, leveraging mobile network operators, we developed and implemented through random digit dialing an interactive voice response (IVR) survey and a computer-assisted telephone interview (CATI) survey to measure non-communicable disease (NCD) risk factors in Tanzania and Bangladesh.

Methods: We used random digit dialing to deploy the CATI and IVR surveys over two rounds of data collection in Bangladesh and Tanzania, and then examined their comparative effects on four outcomes: survey cooperation, completion, non-contact and refusal rates. The survey questionnaire, which was adapted from the WHO STEPS Noncommunicable Disease Risk Factor Survey, consisted of 28 questions spanning five modules (demographics, diet, physical activity, tobacco and alcohol use). An additional section included questions on language selection and consent. Survey outcomes for the IVR and CATI surveys were calculated using equations based on definitions from the American Association of Public Opinion Research.

Results: In Bangladesh and Tanzania, 7,095 and 4,395 CATI surveys, plus 9,628 and 51,853 IVR surveys were respectively deployed between June-July 2017. CATI versus IVR response rates were higher in Bangladesh and Tanzania. Similarly, among those contacted, a high cooperation rate was observed for CATI surveys in both countries (80%) as compared to IVR surveys (51% in Bangladesh vs 60% in Tanzania). Refusal rates were also lower in CATI versus IVR surveys (Bangladesh: 11.7% vs. 32.7%; Tanzania: 15.4 vs. 23.7%). In both countries, CATI survey respondents tended to be younger males with a primary school education; in Bangladesh they also tended to be from rural areas. Similarly, for both countries, IVR survey respondents tended to be young men, but from urban areas with secondary school education.

Conclusions: CATI and IVR surveys conducted in collaboration with local mobile network operators provide an opportunity to collect population-level data. CATI surveys generated higher response, cooperation and completion rates as compared to IVR surveys. For both surveys, however, a notable gender gap exists among respondents; women from both rural and urban areas are less represented as compared to their male counterparts.
Usability and feasibility of a provider decision support smartphone application for frontline health workers in Kenya and Mozambique

Co-authors: Sarah Gimbel-University of Washington; Joana Coutinho-Health Alliance International; Ruth Nduati-University of Washington; Andrew Zunt-University of Washington; Neil Abburi-University of Washington; Kenneth Sherr-University of Washington

Purpose: Option B+ was adopted in Mozambique and Kenya in 2014, and initial results demonstrated poor antiretroviral therapy (ART) adherence and retention in care. Among the multiple health system challenges to implementing Option B+, support for frontline health workers to manage the prevention of mother-to-child transmission (PMTCT) for HIV services and provide clinical care for Option B+ eligible mother-infant pairs were priorities. Decision-support tools tailored to mid-level provider needs may facilitate frontline health worker identification of systems inefficiencies and solutions in HIV testing, ART initiation, and integration with long-term ART services.

Focus/content: In this study, we adapted the excel-based PMTCT Cascade Analysis Tool (mPCAT) to an android smartphone application, and tested its usability and feasibility in Mozambique and Kenya. Specifically we assessed usability with 24 nurses across eight facilities and then feasibility tested the tool over 12 weeks in two high volume facilities providing Option B+ services.

Significance: The Option B+ strategy has the potential to make important advancements in the prevention of mother-to-child transmission of HIV, but early experience has highlighted challenges due to Option B+ service delivery systems not being tailored to meet the needs and realities on the ground. Simple and accessible strategies enabling nurses to independently conduct systems analysis and improvement — especially showing where to intervene along the Option B+ for PMTCT cascade — are needed. Systems Analysis and Improvement, including the use of the PMTCT cascade analysis tool (PCAT) is an approach that can be used to improve the design and delivery of various health service interventions. Harnessing mobile technology formats, specifically applications which can be downloaded and used without incurring additional data transmission costs, present a compelling alternative for computer-based provider decision-support tools. The mPCAT app was shown to be acceptable, interpretable and easy to use for frontline health workers and managers, and the output has been adapted to generate results via Whatsapp to ease use in report writing.

Target audience: The mPCAT app targets frontline and district-level health managers engaged in HIV care with perinatal women and children. This presentation targets health experts interested in improving the engagement of health workers at the frontline health workers
Using data linkage for health systems research: A case study of the Maternal&ChildCostMOD

Co-authors: Haylee Fox - Australian Institute of Tropical Health & Medicine; Emily Callander - Australian Institute of Tropical Health & Medicine

Background

Data linkage transforms routinely collected data into a powerful resource for health systems research by bringing together information from several sources, to create a new, richer dataset. In the era of ‘big data’, using administrative data provides a greater potential than ever before to drive health system effectiveness and improve population health for all Australians by advancing health knowledge, policy and practice. Data linkage is a cost-effective means of generating unbiased, longitudinal evidence about real-world health care use and outcomes. In Australia, it is estimated that effective use of big data could reduce the national health expenditure by approximately 8%, equivalent to more than $11 billion annually.

Using linked administrative datasets, we propose to create Australia’s first model of health service use and cost called Maternal&ChildCostMOD, capturing health care use and expenditure of childbearing women and their babies.

Methods

The Maternal&ChildCostMOD comprises of linked records from the Perinatal Data Collection, Queensland Hospital Admitted Patient Data Collection (QHAPDC), Registrar General Deaths, Emergency Department Information System (EDIS), Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) claim records. The Maternal&ChildCostMOD utilises a sample of patients from the Queensland Perinatal Data Collection of all women and their resultant babies during the perinatal period between 01/07/2012 and 30/06/2015 (n=376,598). The study has been weighted to be representative of the Australian population.

Queensland Health’s Statistical Services Branch (SSB) identified the women in the Perinatal Data Collection during this time period, then the patient records for the mothers and babies were linked to their QHAPDC, Registrar General Deaths, EDIS, and Funding and Costing Unit records within the relevant time frame. This dataset was then linked by the Australian Institute of Health and Welfare (AIHW) with in-scope individual’s MBS and PBS claim records between 01/07/2012 and 30/06/2016 using unique personal identifiers. The AIHW removed identifying characteristics and returned the complete dataset to the researchers. From this point, the full range of health system related costs will be captured by Maternal&ChildCostMOD.

Results

The Maternal&ChildCostMOD will be used for health systems research associated with childbearing and early childhood. The analysis is still underway, however, I will provide a case study demonstrating the use of the Maternal&ChildCostMOD to quantify the out-of-pocket health care expenditure of mothers and their babies during the perinatal period.

Discussion

Building the Maternal&ChildCostMOD posed several challenges due to the limitations around Australia’s data infrastructure. The strengths, limitations and how challenges were overcome will be discussed.
A living lab based design strategy for ICT-based solutions for primary health care: Case study from India

Co-authors: Rajesh Kumar-Post Graduate Institute of Medical Education and Research; Sundeep Sahay-University of Oslo; Dharamjeet Singh Faujdar-Post Graduate Institute of Medical Education and Research; Tarundeep Singh-Post Graduate Institute of Medical Education and Research

Background

Primary health care in low and middle income countries (LMICs) has remained resource constrained, inadequately supervised, and less than optimally utilized. This fundamentally weakens health systems strengthening efforts. Therefore, we aimed to design appropriate ICT innovations for strengthening primary health care, within the changing demands of Universal Health Care (UHC), which involved health information systems radically different from what have traditionally existed.

Methodology

To address the challenge of inappropriately designed systems not reflecting the needs of the context, we established a living lab in the primary health clinic for which the systems were being built. A living lab provides an arena to build the system onsite and in-context, by enabling direct and ongoing interaction between the system developers and the health staff (nurses, supervisor, doctors) who would be the direct users of the system. As the system was introduced, the interaction also took place with patients coming to get care at the clinic.

Two open source platforms were used to design the integrated solution. The first was DHIS2 (District Health Information Software-2) to support the provision of community based services, for example to track TB patients over their cycle of care. The other was OpenMRS (Open Medical Record System) for supporting clinical services. The aim was to consolidate these two databases to cater to clinical and outreach care.

Results

Both the systems were designed and implementation and are currently in full use. Key results from this has been the following: i) about 60% of the catchment population are now registered in the two databases, and can be tracked for providing continuity of care; ii) a novel concept of a family folder is implemented, which can track health related dynamics for the family and also the individual; iii) the system is designed to provide reports to support both clinical care and aggregate facility reports; iv) SMS features have been implemented to enable provision of health promotion and reminder messages to both the patients and care providers; and, v) we learnt about the challenges of integrating the DHIS2 and OpenMRS databases leading us to a design strategy which would combine the OPD and outreach systems in only one platform – the DHIS2. Work is under process for this new platform, which will be tested out in another clinic.

Conclusions

The living lab has proved to be an effective strategy for HIS design for primary health care in resource constrained settings.
Harnessing ‘intellectual proximity’ to deliver effective provider-to-provider tele-consultations: Experiences from Turkana, one of the most remote and marginalised regions of Kenya

Co-authors: Pratap Kumar-Strathmore Business School; M. Whitney Fry-Health-E-Net Limited; Salima Saidi-Health-E-Net Limited; Abdirahman Musa-Ministry of Health Services & Sanitation, Turkana; Vanessa Kithyoma-Health-E-Net Limited

Purpose: Healthcare providers in LMIC health systems often have little ‘physical proximity’ to the resources—equipment, supplies or skilled personnel—needed to deliver effective care, forcing them to refer patients to distant sites. Many patients are also referred because non-physician clinicians (NPC) staffing primary healthcare clinics (PHC) may lack the knowledge to manage cases locally. While telemedicine has long promised to support NPCs with ‘intellectual proximity’ to physically distant expertise, many challenges remain to creating effective tele-consultation services in LMICs.

Focus/content: Health-E-Net, a social enterprise based in Nairobi, Kenya, has designed and implemented a networked referral management and clinical decision support (nREM) system in Turkana County, Kenya. In 2017, the project delivered 42 tele-consultations to NPCs in remote PHCs and managed 20 referrals on its mHealth platform, with clinical support delivered by a volunteer network of remote doctors. The presentation will demonstrate cutting-edge technology that enables rapid case documentation and remote support using mobile devices that rely only on existing telecom infrastructure in the vast, semi-arid region. Quantitative impact and cost savings results will be shared, along with lessons learned using the Appreciative Inquiry qualitative methodology.

The Gabriel platform uses a novel mix of narrative and structured documentation designed to ensure rapid and effective electronic case documentation by NPCs on mobile devices. Information communication is standardised using the situation, background, assessment, and recommendation (SBAR) approach, and besides patient history, NPCs are required to ask specific questions that precipitated the request for support. Qualitative data show wide support from both NPCs and remote doctors for the documentation methods and content, respectively.

The use of volunteers is modelled on blood donation, drawing on any individual doctor’s services infrequently (target utilization of 2-4 hours/month), and maintaining quality by tapping into intrinsic motivation. Both GPs and specialists involved in the project reported altruistic motives to support healthcare delivery to underserved populations, and valued the relationships they built with NPCs during the project, creating a virtuous cycle to sustain future volunteering.

Significance: Ensuring effective clinical documentation on mobile devices, matching ease-of-use with other popular mobile apps (while assuring accuracy and confidentiality), and tapping into network-based resources, are all significant steps into making tele-consultations a central tool in the efforts towards universal health coverage. The experience from Turkana provides a platform for widespread scaling of the technology and approaches used.

Target audience: Anyone interested in design of technology and services to deliver healthcare to marginalised populations.
A video for better management of dengue fever in a health system focused on malaria in Burkina Faso

Co-authors: Catherine Hébert-University of Montréal, Montréal, Canada; Christian Dagenais-University of Montréal, Montréal, Canada; Valéry Ridde-IRD (French Institute For Research on sustainable Development)

In Africa, fever is the main cause of consultation with malaria playing a prominent role. Studies have reported that the widespread use of rapid diagnostic tests for malaria implemented since 2010 has revealed an increasing proportion of non-malaria acute febrile illnesses. In 2013, a dengue epidemic spread in Burkina Faso; there was a new outbreak of cases in the fall of 2016. The annual average number of dengue fever cases reported to the WHO has increased dramatically in recent years. Although dengue death is 99% avoidable, every year around 20,000 deaths are estimated to occur in more than 100 countries. Nevertheless, health worker training in the treatment of dengue patients is sorely lacking in Burkina Faso. Given the resurgence of dengue fever in this country, researchers believe action is urgently needed on two fronts: research and public health interventions.

This research consists in setting up a video training program, consisting of three short videos (approx. 4 minutes) of different format: theatre, animation, reportage. The videos were tested with students of the national public health school (ENSP) in Ouagadougou (n=482 quantitative questionnaires; n = 3 focus group with 46 students; n = 10 in-depth interviews). This test aims at evaluating the effectiveness in improving the learning and preferences stated by the students. Among the video capsules, one was conceived from the illustrations of a caricaturist. His drawings were animated using the After Effects software program.

For the conference, we will present the final version of the 4’ video that was built on the basis of the results of the evaluation.

A link (http://www.equitesante.org/dengue-burkina-faso/) to the video has been sent to agents working in health centres in Ouagadougou via their mobile phones and have been seen almost 3 000 times. This research provides a valuable information on the video format most likely to capture the attention of the audience and thus to promote better knowledge acquisition for the management of dengue fever by the health system.
Feasibility and effectiveness of electronic partograph on improving birth outcome: a prospective crossover design study

Co-authors: Aminur Rahman-International Centre for Diarrheal Disease Research, Bangladesh (icddr,b); Sadika Akhter-icddr,b; Monjur Rahman-icddr,b; Fatema Ashraf-Shaheed Suhrawardi Medical College Hospital; Iqbal Anwar-icddr,b

Background:
The partograph, a framework for assessing the maternal and foetal condition and the labor progression has been endorsed by World Health Organization (WHO). Monitoring labour through partograph can reduce adverse pregnancy outcome such as prolonged labor, emergency C-sections birth asphyxia and stillbirths. However, the partograph usage is still very low particularly in developing country context. In recent days, the electronic version of partograph has been tested in different settings to increase its usages. With this proven evidence, this study opted to test the feasibility and effectiveness of E-partograph for the first time in Bangladesh

Methods:
We followed a prospective crossover design. The study was conducted in two public hospitals following two phases with an intervening pause period to apply the cross over design for paper and E-partograph in between study hospitals. The women who delivered during 2016 were the study participants. The nurse-midwives from each hospital posted in obstetric wards were the implementers. All the nurse midwives received two days training in two occasions one at the inception phase and other during pause period. In total 506 delivery cases were being observed from each hospital equally being divided into two phases. The sample size was calculated with the hypothesis that there will be 50% improvement of e-partograph considering three clinical parameters; increased use of partograph, decreased level of birth asphyxia, and prolonged labour from the existing prevalence. Chi square ($\chi^2$) tests were employed to the test of association between proportions of respondents. Potential confounding factors were adjusted using binary logistic regression. Ethical approval was taken from icddr, b.

Results:
The total number of deliveries conducted in two study hospitals for one year study period were as follows; 2918 at Jessore hospital and 2312 at Kushtia hospital. The trend of cesarean deliveries was downwards in both the study sites; 43% to 37% in Jessore and from 36% to 25% in Kushtia Hospital. The e-partograph user rate was higher in both e-partograph sites (Phase I; 37% vs 21% and Phase II; 38% vs 2%). Even logistic regression with adjustment the results remain the same in both the phases (phase 1: OR 2.2, CI: 5.45-14.3, p < .001 and in phase 2: OR1.9, CI: 4.23-11.86, p < .001)

Conclusion:
Whilst the positive impact of e-partograph has now been proven, the best way to implement it at scale in the health care system now has to be determined.
Support the improvement of technology management in Brazilian National Health System: building a national platform for translation, exchange and social appropriation of knowledge

Co-authors: Jorge Otavio Maia Barreto-Oswaldo Cruz Foundation - Fiocruz; Everton Nunes da Silva-University of Brasilia; Marcus Tolentino Silva-Federal University of Amazonas; Maria-Sharmila Alina de Sousa-Oswaldo Cruz Foundation; Viviane Pereira-Oswaldo Cruz Foundation

Background: Global efforts to institutionalize the knowledge-to-action processes to improve health policy outcomes are ongoing. Knowledge translation (KT) is a dynamic and interactive process that includes synthesis, dissemination, exchange and ethical application of scientific knowledge to strengthen health systems and improve people’s health. However, a gap amongst the KT steps at the implementation level still remains, and adequate mechanisms are required. A national KT platform is being developed in a long-term project in Brazil, including methodological and products development to support the systematic and transparent use of scientific research results at different levels of deliberation on health technologies. Methods: We report our experience on developing the main elements and objectives of this encompassing project to build a national platform to support the improvement of management of health technologies in the Brazilian National Health System, via the development of robust methodological solutions to address the institutional implementation in Brazilian Ministry of Health. Results: This project was divided into four integrated sub-projects: 1) RAPID, to develop and validate methods to produce synthesis of evidence (rapid reviews) on health technologies; 2) POPART, to develop and validate methods and tools to support and improve the social participation in decision making on the incorporation of health technologies in the Brazilian National Health System; 3) iGUIDE, to develop a framework and methodological guideline for implementation of clinical guidelines and health technologies incorporated into the National Health System, identifying barriers and implementation strategies; and 4) CONSCIO, to develop methods and tools to support the institutionalization of knowledge translation processes within the Ministry of Health and for interested groups on specific health technologies. All sub-projects include four development steps: 1) mapping, analysis and synthesis of the global evidence on methods related to its specific objectives; 2) development and validation of methods for the constitution of specific methodological guidelines; 3) capacity building activities and dissemination of developed methods; and 4) development of operational products based on the methods developed. The project begun in 2016 and will be fully implemented by 2020. Conclusions: This report addresses a comprehensive platform for health technologies’ KT encompassing the development of methodologies based on global evidence and validated for a specific context of implementation - the Brazilian Ministry of Health. Although in its initial phases, first results indicate an opportune framework to both develop and institutionalise KT for larger contexts. Monitoring and evaluation are planned to ensure that the intended results are being produced.

Uganda, with a population of over 41 million continues to bear a heavy burden of HIV with a current adult prevalence of 7.0 %. In the absence of any intervention, mother to child HIV transmission rates range from 15% to 45% during the periods of pregnancy, labour, delivery and breastfeeding. Although positive strides have been made to initiate mothers into EMTCT programmes, sustainability of mother-baby pairs in EMTCT is low with only 56% of mothers retained under care after 6 months. We sought to assess if using mobile health services can promote uptake, retention and success of EMTCT.

The Medical Concierge Group runs a 24/7 medical call centre that provides access to doctors and pharmacists for medical consultations. Access is through voice calls, a two-way SMS platform, Facebook, Twitter, WhatsApp, e-mail, and video calls. TMCG partnered with 17 health facilities based in high HIV catchment regions countrywide where pregnant ladies that tested HIV positive consented for mobile health services. In addition, all HIV positive pregnant ladies that contacted us across the various mobile health platforms consented and were added into the mother-baby pair database. Follow up calls were made every after three months and SMS reminders on ART adherence, positive living, and return health facility visits for ART refill and monitoring were scheduled to mothers until their babies reached 18 months. A retrospective review of the HIV positive mother database was done from 2016 to 2017.

From 2016 to 2017, 1,374 HIV positive clients consented for mobile health support. 201 mothers consented for EMTCT mobile health support (voice calls and SMS reminders). During the follow up calls in June 2017, 152 (75.62%) mothers reported to have honoured all appointments. Their babies had completed taking Nevirapine, were taking Co-trimoxazole and had undergone first PCR test. 28 (13.93%) mothers were lost to follow up. 21 (10.45%) did not honour their health facility appointments. On follow up during December 2017, 144 (71.64%) mothers had been fully retained in care, their babies had had the second PCR. 32 (15.92%) were lost to follow up whereas 25 (12.44%) had not honoured appointments. By December 2017, 40 babies (19.92%) had successfully completed the 18 months EMTCT program after testing HIV negative with the HIV anti-body test at 18 months.

Integration of mobile health into the general health system presents great promise in promotion of uptake, retention, and overall success of the EMTCT and general HIV/AIDs care.
Las competencias ampliadas de enfermería como herramienta para mejorar la atención de las Enfermedades No Transmisibles (ENT) en el primer nivel de atención en México

Introducción:
En México, la creciente carga de ENT representa un enorme desafío para el sistema de salud, agravando las inequidades existentes en cobertura, protección financiera, acceso a servicios y poniendo en riesgo los avances hacia la salud universal.

A pesar de los esfuerzos realizados, la capacidad de respuesta del sistema de salud no ha sido suficiente para reducir el impacto de las ENT y en la actualidad tres de ellas (cardiopatía isquémica, diabetes mellitus y enfermedad renal crónica) constituyen las principales causas de muerte prematura. A fin de abordar esta problemática, la Secretaría de Salud decide implementar una estrategia de ampliación de funciones para enfermeras en el primer nivel de atención. La iniciativa comprende tres componentes: el desarrollo de mecanismos normativos, la definición del perfil, competencias y funciones ampliadas, un plan de actualización y formación específica con enfoque comunitario.

Este artículo tiene como objetivo presentar el proceso de desarrollo de la estrategia para la incorporación de enfermeras con un rol ampliado en el primer nivel de atención del sector público del sistema de salud mexicano.

Métodos
Revisión sistemática de la literatura, análisis de instrumentos normativos de México y de documentos técnicos de la OPS-OMS y del Consejo Internacional de Enfermeras para la definición de las competencias del rol ampliado; formación de grupos de trabajo para el desarrollo del marco conceptual y el plan operativo de la estrategia incluyendo la convocatoria de actores estratégicos.

Resultados
Se definieron roles e intervenciones con base en la literatura publicada y el Manual de competencias esenciales de salud pública de OPS/OMS.

Se inició la revisión de los programas curriculares para su re-orientación y estandarización y se convocará a expertos para el desarrollo de modificaciones o nuevas reformas.

Se espera desarrollar el plan operativo de implementación dentro de los próximos meses.

Discusión/Conclusiones
El proceso realizado hasta ahora ha logrado visibilizar los beneficios de ampliar el campo de acción de las enfermeras en el primer nivel de atención en México. Dichos beneficios serían un uso más eficiente de los recursos humanos en el desarrollo de intervenciones para reducir el impacto de las ENT; una detección temprana de cardiopatías isquémicas; el tratamiento oportuno de la Diabetes Mellitus y la prevención de lesiones renales derivadas de esta enfermedad; y la reducción de brechas de acceso geográfico especialmente para servicios preventivos. Resulta fundamental continuar desarrollando los tres componentes de la estrategia en el corto plazo y documentar sus resultados.
Intercambio Prestacional en Salud en el sector público: hacia el Aseguramiento Universal en Salud en el Perú

Co-authors: JOSE CABREJOS-Programa SISTEC - Cooperación Técnica Belga

El AUS supone que toda la población residente en el territorio nacional acceda a un conjunto esencial de prestaciones en condiciones adecuadas de eficiencia, equidad, oportunidad, calidad y dignidad. Durante la última década, la cobertura de peruanos afiliados a algún tipo de seguro ha crecido significativamente; sin embargo, existe evidencia también que el sistema de salud, segmentado y fragmentado, no ha cumplido con garantizar plenamente la protección y defensa de los derechos a la salud y a la seguridad social de todos sus ciudadanos. En este contexto el Intercambio Prestacional en Salud (IP) constituye una estrategia para mejorar la cobertura efectiva de servicios de la población en zonas rurales optimizando la eficiencia de la oferta pública.

Propósito: Compartir la experiencia del Programa SISTEC[5] en el marco de su objetivo general: garantizar el derecho de toda persona en situación de pobreza y pobreza extrema a servicios de salud de calidad. Contenido

A fines del 2016, el Ministerio de Salud del Perú, EsSalud[6], el SIS[7], SUSALUD[8] y el Programa SISTEC iniciaron un proceso de colaboración interinstitucional para el diseño e implementación piloto de una propuesta de Intercambio Prestacional de Salud. Se incluyeron 13 IPRESS[9] del primer nivel de atención del Gobierno Regional de Cajamarca para prestar atenciones a los afiliados a EsSalud y sus derechohabientes. Importancia: Estrategias que permitan extender la cobertura real de servicios a la población en situación de vulnerabilidad mejorando la oferta pública son esenciales en países de ingresos bajos o medios y con sistemas segmentados y fragmentados. La experiencia peruana de IP podría contribuir a esta discusión. Público objetivo: decisores de políticas públicas, gestores de organizaciones de salud.


[6] El Seguro Social de Salud del Perú administra los fondos provenientes de las contribuciones de los trabajadores formales para su atención en los establecimientos de su red propia (segundo y tercer nivel de atención)


[8] SUSALUD promueve, protege y defiende el derecho de las personas al acceso a los servicios de salud, supervisando que el uso de los recursos asignados garantice la calidad, oportunidad, disponibilidad y aceptabilidad de las prestaciones.
Ciro Mestas, “Programa de Apoyo a la política de Aseguramiento Universal en Salud en el Perú, a través del SIS” (SISTEC)
Poster Number: 399

REFORMA DEL SECTOR SALUD EN EL PERÚ: ANÁLISIS CONCEPTUAL

Co-authors: Ciro Abel Mestas-“Programa de Apoyo a la política de Aseguramiento Universal en Salud en el Perú, a través del SIS” (SISTEC); Miriam Rocío Miranda Núñez-Hospital Nacional Adolfo Guevara Velazco de EsSalud

Motivación:
Reforma en Salud, es aquel cambio que se propone, proyecta o ejecuta con el objetivo de conseguir innovación o mejora del sector; El Perú tuvo uno de estos procesos el último lustro. Se plantea una revisión conceptual de los principales aspectos y su impacto en el cambio efectivo del sistema de salud.

Objetivo:
Comparar las definiciones conceptuales de la Organización Mundial de la Salud (OMS) y la bibliografía más relevante con las definiciones usadas por la gestión de Ministerio de Salud que llevó a cabo la última reforma del sector.

Metodología:
Se seleccionaron aspectos de una reforma en salud como: Derecho a la Salud, Descentralización, Rectoría, Financiamiento y Ciudadanía en Salud.

Resultados:
El concepto de derecho a la salud definido como el “grado máximo de salud que se pueda lograr” no fue considerado como tal y sí como “derechos en salud” que implica más a los derechos de los consumidores de servicios de salud. La descentralización en salud definida como la transferencia de facultades, competencias y recursos en salud desde el nivel de gobierno central nacional a instancias del poder democrático de nivel regional y local, no tuvo un sentido dinámico, democrático, integral, subsidiaria ni fue de gradual a permanente e irreversible. El sistema aumentó su fragmentación y segmentación. La participación ciudadana en salud no tuvo espacios de concertación política democrática e intergubernamental. Las principales funciones rectoras de la autoridad sanitaria nacional fueron delegadas. El financiamiento del sector se triplicó, sin embargo, durante la implementación de los decretos legislativos autorizados por la Ley N° 30073, comparativamente a otros países de la región se evidenció: una disminución de la cobertura de vacunas; un reducido acceso a agua potable, las incidencias de tuberculosis y malaria fueron de las mayores en de la región. El recurso humano continúa con tan solo 26.5 profesionales de la salud por 10 000 habitantes

Conclusión:
Los procesos de reforma del sector salud en el Perú, han hecho que proporcionalmente se aumente el aseguramiento en salud, mas no se ha incrementado la cobertura de los servicios de salud en la misma proporción. Entre otros quedan pendientes algunos importantes tales como: que la salud sea un derecho efectivo, fortalecer la rectoría de la autoridad sanitaria, solucionar los problemas históricos de segmentación, fragmentación y desfinanciamiento del sistema.
Intervención multidimensional para mejorar el acceso a salud en poblaciones vulnerables en Chiapas, México

Co-authors: Valeria Macias-Compañeros en Salud; Francisco Rodríguez Garza-Compañeros en Salud; James Vahey-Compañeros en Salud; Hugo Flores-Compañeros en Salud; Gustavo Nigenda-Compañeros en Salud

En 2003, el gobierno mexicano implementó un esquema de financiamiento médico llamado Seguro Popular (SP), con el objetivo de proveer servicios médicos a 50 millones de personas previamente no aseguradas. En la actualidad, existen beneficiarios del programa que no pueden acceder o completar su atención médica debido a dos razones principales: un sistema de referencias médicas poco eficiente, y barreras no consideradas en el esquema de financiamiento y atención.

Un ejemplo de lo anterior es el estado de Chiapas, segundo lugar del país en grado de marginación, donde el 87% de la población viven bajo condiciones de pobreza y 32.2% bajo pobreza extrema. En la zona de la Frailesca, la población tiene raíces indígenas y viven en comunidades geográficamente aisladas. Su ubicación les permite dedicarse a la caficultura que les genera $4.24 USD diarios.

En Chiapas, la poca coordinación entre niveles de atención, falta de capital económico, y un sistema de salud complejo prohíben que estas poblaciones accedan a atención médica especializada en hospitales públicos. Las barreras existentes para el acceso a servicios médicos, son gastos no médicos como el costo del transporte, alojamiento y comidas. Así como los gastos médicos que el SP falla en financiar como laboratorios, estudios de imagen, renta de equipo médico y medicamentos. Además, los pacientes se enfrentan a un sistema de salud altamente burocrático y discriminatorio que dificulta su navegación.

Desde 2011, Compañeros en Salud (CES) brinda atención médica gratuita en diez comunidades que presentan grados altos o muy altos de marginación en la Sierra Madre de Chiapas. En 2014, CES dio inicio al programa de referencias médicas Derecho a la Salud (DALS), el cual tiene como objetivo facilitar el acceso a servicios públicos de salud especializada de sus pacientes, beneficiarios del SP. Complementando la atención primaria rural, un equipo multidisciplinario trabaja para solventar problemas logísticos, los gastos médicos y no médicos enlistados, además de proveer acompañamiento médico para facilitar la navegación, y el diálogo, abogando por el trato efectivo y digno. El objetivo de ésta intervención es evitar gastos empobrecedores o catastróficos, retrasos o suspensiones en el tratamiento y proveer atención médica oportuna y de alta calidad. Éste abordaje multisectorial ha logrado beneficiar a más de 700 pacientes. Incluyendo 96 cirugías y 1451 consultas en los últimos dos años. Intervenciones como ésta, deben considerarse para que las poblaciones más vulnerables alcancen la equidad en salud bajo esquemas de cobertura universal.
Introducción: Desde 1978 la OMS consideró la importancia de la Atención Primaria para mejorar la salud de las personas, familias y comunidades, con equidad y mejores condiciones sociales. En 2011, Colombia incluyó el enfoque normativo de Atención Primaria para avanzar en las prioridades de salud y superar un sistema hasta entonces curativo y basado en los servicios hospitalarios.

Metodología: Se describe una intervención en salud tipo investigación-acción participativa, realizada en comunidades colombianas con el propósito de empoderar a sus miembros como actores sociales para el cambio de su realidad sanitaria. Incluyó ocho organizaciones comunitarias de Bogotá y Cundinamarca y se realizó en tres etapas: (i) formación de líderes comunitarios en la formulación e implementación de iniciativas para mejorar la salud; (ii) implementación de planes de mejoramiento en atención primaria de salud en cada organización, sobre los problemas de salud más relevantes y (iii) sistematización de la experiencia y aprendizaje del proceso.

Resultados: Se formaron 28 líderes comunitarios que formularon e implementaron ocho planes de mejoramiento para la resolución de los problemas de salud más relevantes: protección de espacios públicos para la actividad física en niños; prácticas familiares para la alimentación en niños; articulación de la red de beneficiarios hacia la promoción de salud; articulación de la red de prestación de servicios para el habitante de la calle; articulación terapéutica para la discapacidad cognitiva; mujeres sin violencia; maltrato infantil; e integración de salud y educación en el currículo escolar. Las lecciones aprendidas fueron: el desarrollo de capacidades en atención primaria, la aproximación a la atención de condiciones intra e interinstitucionales y el manejo de procesos de apropiación comunitaria.

Conclusiones: La intervención permitió exponer y evaluar el desarrollo de iniciativas de atención primaria en distintos tipos de organizaciones y en el enfrentamiento a problemas diversos. En todos los casos se puso de manifiesto la comprensión de los participantes de su rol como gestores de salud, el fomento de la participación de la comunidad y la importancia de la acción intersectorial.

A National Quality Strategic Framework for South Africa – an Imperative for NHI

Co-authors: Kerrin Begg-Stellenbosch University; Gail Andrews-National Department of Health, South Africa; Lilian Dudley-Stellenbosch University; Punithasvaree Mamo-Stellenbosch University; Justin Engelbrecht-Stellenbosch University; Lebogang Lebese-National Department of Health, South Africa

Purpose: A clear agenda for quality healthcare, through the right to health enshrined in the Constitution, has been expressed in numerous policies in South Africa since 1994. Despite this, stark differences between the actual and desired quality of health services have been experienced by communities, and the health system has not achieved health outcome improvements hoped for.

The 2007 national policy on Quality of Care (QOC) aimed to improve access, eliminate inequities and increase safety in healthcare. It was conceptually sound, but lacked actionable strategies, which could contribute to improvements in quality of health care.

More recently, there has been a proliferation of quality initiatives including Accreditation, the National Core Standards, Office for Health Standards Compliance, the Ideal Clinic Programme, Best Care Always and several PEPFAR interventions amongst others. These have largely been uncoordinated and fragmented across public and private sectors, and predominantly focused on the Quality Assurance aspect of the Quality spectrum. The lack of sustained quality improvement processes has meant that there has not been a significant impact on health services and health outcomes.

Focus: A policy review and situational analysis of quality initiatives across South Africa to leverage best practices were conducted to inform the development of a multilevel national quality strategic framework. The framework was drafted to institutionalize and guide national strategy, planning, delivery and measurement of a high quality health system for quality in healthcare. The process included a desktop review of published and unpublished literature as well as key expert and stakeholder engagement.

Significance: The successful implementation of Universal Health Coverage through National Health Insurance requires a foundation of quality healthcare. An overarching national quality strategic framework, which provides stakeholders with a common understanding of the quality spectrum, can facilitate policy coherence and locate initiatives in the quality planning cycle in order to improve co-ordination and implementation of quality strategies at scale, and provide metrics to monitor and measure outcomes.

The imperative for this work is clear – “Without quality, the NHI will fail” (Dr Precious Matsoso, 2018, National Lancet Commission for High Quality Health System in the SDG Era).

Target audience: Policy-makers, health system and program managers, researchers
Vandana Gautam, Oxford Policy Management (OPM), India  
Poster Number: 403

**Comparing standard measures of assessing quality of care in family planning with the use of the standardised mystery client method**

**Co-authors:** Ruhi Saith-Oxford Policy Management (OPM), India; Vandana Gautam-Oxford Policy Management (OPM), India; Karima Khalil-Independent Consultant; Jashan Bajwa-Oxford Policy Management (OPM), India; Nayan Kumar-Oxford Policy Management (OPM), India

**Background** 
This study was undertaken as part of the assessment of the quality of family planning services at different levels of service delivery across Bihar by the Monitoring Learning and Evaluation (MLE) component of the BMGF supported Bihar Technical Support Program (BTSP). In Bihar, the status of the quality of discrete components of family planning services is largely undocumented except for a small number of studies, (Gill et al., 2009; Achyut et al., 2014; Iyengar et al., 2015). In order to fill this gap and better understand programmatic barriers to contraceptive uptake, BTSP-MLE applied a triangulated approach.

**Data** 
100 family planning providers and 225 users were interviewed in a sample of 100 health care facilities of different levels across 32 districts in Bihar, coupled with 197 mystery client consultations.

**Methods** 
This study examined the quality of family planning counselling in the state of Bihar, India, using a triangulated approach, complementing standard data collection from provider and client exit interviews with mystery client consultations, with the mystery client data as the reference standard. The mystery client approach, being inconspicuous is expected to yield more accurate data than approaches using client or provider interviews or third-party observations (Huntington et al 1990 and 1993; Madden, 1997; Tumlinson, 2014; Das et al., 2012).

**Findings** 
Agreement between mystery client and exit interview data was low with actual clients over-reporting positive aspects (especially with regard to respectful care). Agreement between provider interviews and mystery client findings was also low but in an un-anticipated direction, with providers significantly under reporting 2 of 5 positive behaviours. In provider interviews, only around 20 percent reported that they explain to clients how to use the method, while they actually did so in a higher percentage (69 percent) of mystery consultations. Similarly, only 34 percent reported that they ask clients about reproductive goals while 63 percent actually did so for mystery clients.

**Conclusion** 
To our knowledge, the mystery client approach has not been used earlier to assess the quality of family planning services anywhere in India. Findings suggest that reliance on standard instruments to assess quality can yield an incomplete picture of actual provider practices. Modified or expanded methods of data collection on family planning service quality are needed and the mystery client approach should be considered wherever it is logistically feasible to do so. It can help explain findings from other methods as also contribute additional findings.
Measuring Quality in Malawi’s Community Health System: Barriers and Challenges

Introduction

In Malawi, a National Quality Assurance Policy outlines the need to monitor the quality of care and management across the health system, using a combination of national and district level indicators. Quality assurance and improvement depends upon the use of reliable data. This study sought to understand how data is generated at the community level by health surveillance assistants (HSAs) and how this contributes to evidence-based quality improvement at different levels of the health system.

Methods

In eight health centres in Mchinji and Salima districts, interviews (49) with purposefully selected senior HSAs, Facility-in-Charges, data clerks and focus group discussions with community health volunteers (15) were conducted. The ‘framework approach’ was used to analyse data. The coding of transcripts was conducted with the use of the qualitative data management and analysis software Nvivo10. Narratives were written on major emerging themes related to data collection, quality and use.

Results

Quality improvement initiatives were confined to specific programmes and not to the entire health system at district and facility levels. These initiatives were mostly focused on infection control and data quality did not receive particular attention. The collection of community-level data was a clear and well-known task of HSAs, however, the data collected was regarded as of poor quality and in most cases not systematically analyzed for decision-making in community, facility or district hospital. Data collection was severely hampered by a lack of structured, national tools below the facility level for collecting basic activity and incidence data. There were no standard Ministry of Health forms, except for a few programmes that were supported by non-governmental organizations. Data was often provided to the next level up in the health system as a ‘tick-box exercise’, without interpretation; and data quality assessments were seldom conducted and rarely used in HSA supervision.

Conclusion

A well-functioning and accountable health system is reliant on good quality data. In Malawi, there is a need for quality improvement interventions at the community level which focus on this area. Efforts should go beyond data collection as a ‘tick-box exercise’ and this needs capacity building of HSAs, their supervisors and managers at the district level. When there is joint responsibility in collection and interpreting quality data, quality of care could make a step forward at the community level.
Background: Institutional entrepreneurs (IE) are actors with social and political skills who are able to lead efforts to respond positively to system challenges and bring about system change. They can help to mitigate uncertainty, harness opportunities, frame issues and mobilise constituencies to infuse new values and practices. District-based Clinical Specialists Teams (DCSTs) were recently introduced in South Africa to implement clinical governance, an important strategy for building health system capacity and advancing access and quality health care for all. We present an interpretive qualitative account of micro-level activities and processes of clinical governance by a DCST to explore whether and how they are functioning as IE at a local service delivery level. We seek to understand how lower-level actors in the health system hierarchy influence and exert change in a system undergoing multiple reforms towards universal health coverage.

Methods: In one health district, between 2013 and 2015, we carried out 59 in-depth interviews with district, sub-district and facility managers, DCST members and external actors. We also ran one focus group discussion with the DCST and analysed key DCST-related policies. Using an IE conceptual lens, we analysed key activities, functions and perceptions of the DCST, drawing out whether and how they contribute to institutional change.

Results: The DCST is located in a constrained context. Yet, by revealing and bridging gaps in the system, the team takes on certain IE characteristics. Individual DCST members are also able to function – more or less – as IE by announcing reforms, articulating the strategic vision and direction of the system, advocating for change, mobilising resources and assessing and mitigating risks.

Discussion: DCST functioning promotes a collective IE effort but not all members of the DCST take on IE functions in the same ways. Some members seem better positioned and motivated to engage more proactively than others to bring change to different levels of the district organisational structure, using strategies such as representing co-DCST members in strategic meetings, establishing platforms to convene potential actors to embrace change and articulating interests to promote change. Yet, such moves to spearhead change may also reveal struggles between members themselves given the power dynamics that drive change.

Conclusion: The DCST innovation provides an opportunity to promote institutional entrepreneurship given the influence of their activities on system change. Yet there are nuances between individual members and the team, and these need better understanding to maximize this contribution to change.
Public Health expenditure and life expectancy in Iran: how equitable and well do we perform?

Co-authors: Haniye Sadat Sajadi-National Institute of Health Research, Tehran University of Medical Sciences; Farkhonde Sadat Sajadi-University of Isfahan; Zahra Goudarzi-National Institute of Health Research, Tehran University of Medical Sciences

Background: Providing affordable access to safe and high-quality health care services for entire population (so-called Universal Health Coverage: UHC), in an equitable and efficient manner, has become a priority for countries over the past decade. To do this, it will inevitably require governments spend their limited budgetary resources on this priority and also they improve the efficiency of their health system. During recent years, Iran has taken a series of initiatives to ensure UHC. However, it is unknown that to what extent the country has successfully performed fair and efficient to reach this goal. In order to gain perspective on this issue, we 1) examine whether or not there is disparity in public spending within the country 2) determine the ratio of useful health outcome to total public spending.

Methods: Two indicators, including General Government Health Expenditure (GGHE) per capita, (Purchasing Power Party: PPP) and Life Expectancy (LF) at birth were selected. Afterward, using data sources including the national consensus and provincial health account, we analyzed provincial inequality in GGHE per capita and LF versus GGHE per capita in Iran (2011). Gini coefficient were used for measuring inequality.

Results: Our results show that while the GGHE per capita, (PPP) varied from 103$ to 829$, the distribution of public spending is equitable (Gini coefficient was 0.09). All provinces had the same ratio of LE to GGHE (ranging from 0.1 to 0.2), except one province which had better performance with the highest ratio (0.9).

Conclusion: Given these finding, it could be concluded that the Ministry of Health and Medical Education (MOH&ME) has a fair mechanism to allocate the governmental resources within the country. However, health system at provincial level is not efficient. Since efficiency is critical to sustainability, the country should undertake reforms and initiatives to address this issue. In this route, it is recommended that countries’ efforts made to improve the efficiency in their health systems is reviewed. Furthermore, it is suggested that a case-study research is done to find how the top ranked province in efficiency has performed.
Hong Tran, Hanoi University of Public Health
Poster Number: 407

Leaving no death or cause of death behind: completeness and reliability of mortality data recorded in the national health information system in Viet Nam

Co-authors: Hong Thi Tran-Hanoi University of Public Health; Peter S Hill-University of Queensland; Sue M. Walker-Queensland University of Technology; Hoa Phuong Nguyen-Hanoi Medical University; Chalapati Rao-Australian National University

Background. Mortality statistics form a crucial component of national health information systems (HIS). The Sustainable Development Goals include 12 mortality indicators which are essential for priority setting, resource allocation, and measuring progress towards global health targets. If we are to leave no one behind, we need a comprehensive understanding of the number of deaths and causes of death (COD) in the community. Better COD data is needed if health services and financial protection are to address the burden of disease, especially among more marginalized people. While the Civil Registration and Vital Statistics system is under development, the “A6 death register” which has been maintained by the Ministry of Health could provide empirical national mortality data for Viet Nam. Therefore, this study assessed the completeness of deaths reporting and the reliability of COD recorded in this system to support its utilization and improvement.

Methodology. Quantitative and qualitative methods were applied. The study identified 1477 deaths in 26 communes from two provinces from different data sources. Verbal autopsy (VA) methods were utilized for 1365 deaths to identify the underlying COD, and these were then compared with the CODs recorded in the A6 registers. Four focus group discussions were conducted with community health workers to provide additional information about the current mortality collection.

Results. The completeness of deaths recorded in different communes ranged from 71% to 100%. The reporting of deaths in children under the age of five years is low. For some deaths that are considered sensitive, such as deaths due to communicable or stigmatised diseases (HIV/AIDS, deaths in prison or due to illicit drug use), the family may be reluctant to report, which may be the reason for under-reporting as well as the inaccuracy of COD reported.

There was low reliability in recording of stroke, ischaemic heart diseases, and diabetes (kappa &lt;0.5); and moderate reliability for deaths due to road traffic accidents, HIV and cancers (kappa &lt;0.7). Ill-defined or inaccurate COD was found in group of poor people who didn’t visit health facilities for treatment.

Conclusions. Counting every death and understanding accurately why people die is crucial to design a health system that deliver for all. Viet Nam needs a comprehensive register of deaths. Triangulation with death records from other sources would improve completeness. Integrating VA methods into the national HIS A6 death registers could be effective in enhancing the accuracy of COD recorded.
Masuma Mamdani, Public Health Specialist, Ifakara Health Institution, Tanzania  
Poster Number: 408

**A new approach to strengthening accountability for better health outcomes for all: Insights from Tanzania**

Co-authors: Masuma Mamdani—Public Health Specialist, Ifakara Health Institution, Tanzania; Peter Binyaruka—Research Scientist, Ifakara Health Institution, Tanzania; Mary Ramesh—Research Scientist, Ifakara Health Institution; Irenei Kiria—Executive Director, SIKIKA, Tanzania; Ntuli Kapologwe—Director of Health, Social Welfare & Nutrition Services, Presidents Office – Regional and Local Government, Tanzania; Eleanor Hutchinson—Assistant Professor, Anthropology and Health Systems, London School of Hygiene and Tropical Medicine; Dina Balabanova—Associate Professor, Health Systems/Policy, London School of Hygiene and Tropical Medicine

The Primary Health Care principles are based on community participation and equity, which are supported by health promotion, intersectoral collaboration, and proper use of scarce resources for a universal health coverage. This presentation challenges current thinking around addressing corrupt practices within health systems which to date have been largely unsuccessful. Drawing on preliminary findings from research carried out in Tanzania under the Anti-Corruption Evidence (ACE) consortium, we consider new approaches to addressing corrupt practices within health systems, with a focus on uncovering the informal systems and relationships between the formal and the informal institutions that can make the system work.

Tanzania’s large and dispersed health system is complex, dynamic and ever changing, struggling to meet the needs of a large and diverse population amidst a double burden of continuing infectious disease epidemics and increasing burden of Non Communicable Diseases. Patients and health providers in Tanzania face many challenges not just related to resource constraints but including de-motivated health workers, high absenteeism rates and low productivity; medicine stock-outs and leakages; ill-informed consumers and providers; failure to grant exemptions and waivers to the most vulnerable; and weak accountability, management and planning systems. Such systemic challenges and accountability constraints can often result in substandard care, and in extreme cases, no health care for the most marginalized. Attention is focused on strengthening delivery of quality primary health services to optimize use of available scarce resources as well as to ensure equitable and essential care.

Based on a systematic documentary review of available information, complemented by key informant evidence from public and private health providers and other health system stakeholders in Tanzania, and drawing on a political economy analysis, this presentation identifies the system bottlenecks as well as catalysts; and explores the potential of reforms, strategies and interventions (for example, evidence informed planning for results based delivery, direct facility financing, Health Facility Governing Committees, community monitoring systems and other citizen engagement initiatives, etc.) to address accountability constraints and corrupt practices towards a more resilient, efficient and accountable health system.

Given the paucity of evidence on successful interventions in this area, our research evidence will be of significant interest to the target audience which includes practitioners, academics, NGOs, think tanks, activists and policy makers at national, regional and global level.

Collaborators and Funding: Research undertaken under the ACE consortium with technical support from LSHTM and SOAS, University of London. Funded by DFID, UK.
Strengthening the science and ethics of health policy and systems research (HPSR): our experience with embedding ethics reflection sessions into diverse HPSR studies

Co-authors: Sassy Molyneux-KEMRI-Wellcome Trust; Jacinta Nzinga-KEMRI-Wellcome Trust; Rita Wanjuki-KEMRI-Wellcome Trust; Scholastica Zakayo-KEMRI-Wellcome Trust; Maureen Kelley-University of Oxford; Benjamin Tsofa-KEMRI-Wellcome Trust; Edwine Barasa-KEMRI-Wellcome Trust; Vicki Marsh-KEMRI-Wellcome Trust; Lucy Gilson-University of Cape Town

Purpose: There is a growing interest in the ethics of Health Policy and Systems Research (HPSR), including calls for more conceptual and empirical work to contribute to discussion and debate. We will contribute to filling this gap, with a focus on the ethics issues and dilemmas experienced over the course of the research, post ethical approval. This is important: the focus in much of our training and shared experience tends to be on working towards and ensuring ethical approval, whereas many of the ethics issues and dilemmas that keep us awake at night emerge over the course of doing the research in contexts of inequity and vulnerability, and making sure the research has value once it has ended.

Focus/content: We will share the theory behind introducing ethics reflection sessions into our studies, and our experience of doing so. In so doing we will draw on three very different case studies:

a) our learning site work in Kenya and South Africa in which we as researchers are embedded in the health system we are studying; where we have been working collaboratively with health system managers over the last 5 years to understand and strengthen day-to-day health system governance.

b) Multi-disciplinary health services research on neonatal care in hospitals in Kenya, which includes ethnographic work on health worker-parent relationships in hospitals, and

c) Health system research elements of an international Childhood Acute Illness and Nutrition Network (CHAIN). CHAIN is an observational multi-site cohort study looking at determinants of child survival during and after hospital discharge for malnourished children aged 2 to 24 months, with the overall aim of developing interventions to reduce mortality.

We will illustrate some of the (differing) ethical issues that were raised across these case studies and show that potential solutions; often lead to new issues and complications. Many of these issues and dilemmas are never shared in scientific outputs, despite being critical to them.

Relevance to sub-theme area/field-building dimension: Doing HPSR requires engagement with ethics guidance and with the moral dilemmas thrown up over the course of conducting studies in the context of significant and complex of global inequity and often significant layers of vulnerability among many of our research participants. We will reflect on the importance of carefully considering context embedded and gendered social relations, and researcher ‘positionality’ in research planning and conduct, and share policy, practice and research implications.

Target audience: health systems researchers and reviewers.
Poster Abstracts

Obinna Onwujekwe, College of Medicine, University of Nigeria
Poster Number: 410

Investigating common types and mitigation strategies for corruption in the health sector of Anglophone West Africa

Co-authors: Obinna Emmanuel Onwujekwe-College of Medicine, University of Nigeria; Hyacinth Ichoku-University of Nigeria Nsukka; Eleanor Hutchinson-London School of Hygiene and Tropical Medicine; Aloysius Odii-University of Nigeria Nsukka; Prince Agwu-University of Nigeria Nsukka; Tochukwu Orjiakor-University of Nigeria Nsukka; Adaobi Ogbozor-College of Medicine, University of Nigeria; Uche Obi-College of Medicine, University of Nigeria; Chinyere Mbachu-College of Medicine, University of Nigeria; Pallavi Roy-School of Oriental and African Studies; Mushtaq Khan-School of Oriental and African Studies; Dina Balabanova-London School of Hygiene and Tropical Medicine

Background

Corruption is the misuse of entrusted power for private gain. It is wide-spread in the health sector and has, negative effects on health indicators. There is a paucity of knowledge about its the systemic nature, and the ways in which informal institutions and social networks drive corrupt practice in the West African health systems. To provide knowledge for the planning, designing and implementation of high-impact, feasible anti-corruption strategies in Nigeria, this study analysed evidence on types of corruption, different incentives that drive rule-breaking and the evidence on successful anti-corruption strategies among frontline health care providers and managers.

Methods

A review of literature focused on Anglophone West African countries: Nigeria, Liberia, Gambia, Ghana and Sierra Leone. The search was conducted using key Boolean operators to retrieve relevant studies, using a range of search engines. The review included both published and grey literature.

Findings:

A total of 285 publications were retrieved, but 67 of them met the inclusion criteria for detailed review. Across Anglophone West Africa, five types of corruption in the health sector were commonly identified, by order of frequency: (1) absenteeism and late coming; (2) diversion of patients from public to private sectors; (3) inappropriate prescribing; (4) informal payments/bribery; and (5) theft of drugs and other supplies. Corruption was seen to delay progress towards Universal Health Coverage (UHC) as it favours tertiary over primary healthcare programmes. Corruption is driven through social networks, patients seek out providers that they know socially and frequently providing bribes. Alongside these are economic drivers, unpaid of salaries, and lack of other opportunities to increase salary and seniority. The review did not identify specific interventions that were used to actually control corrupt practices. Most studies appear to draw from personal experiences and existing literature to recommend approaches with prospects of combating corruption. Overall, types of corruption were better described than drivers. More evidence is needed on how social and economic incentives combine and shape rule-breaking.

Conclusion:

The review demonstrated that the problem of corruption is increasingly recognized across West Africa as a problem distorting access to essential care and distorting health systems operation. The five most common types of corruption were similar across the Anglophone West African countries and various strategies for mitigating these are suggested. This highlights the opportunity for regional strategies to address corruption as an important but insufficiently studied obstacle to accelerating progress towards UHC.
Landscape Analysis to Provide Insight on Barriers and Facilitators to Policy Translation and Commodity Access in the Public and Private Sector.

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A huge number of children die worldwide due to pneumonia and diarrhea because the health systems don’t respond to the needs of those children. Pakistan has also a very high rate of under-five mortality due to pneumonia and diarrhea and a major reason for this is unavailability of essential updated commodities for treatment. This landscape analysis was conducted to identify the barriers and facilitators for the availability of the updated essential commodities for pneumonia and diarrhea. This analysis intended to bridge the gaps in bringing about specific policy change, its translation and implementation for the pneumonia and diarrhea commodities, while keeping in view the political economy context of Pakistan at all the possible levels of health systems.

This landscape analysis – a cross-sectional study – was based on the problem-driven frameworks and consisted of desk review of literature and qualitative assessment conducted through key-informant interviews (national and provincial policy makers and planners, health managers, public and private sector service providers, donors, development partners, pharmaceutical manufacturers, and service users) and focus group discussions with community workers.

The landscape analysis effectively identified areas for policy translation that will improve the management of children suffering from Pneumonia and Diarrhea. The findings led to pathways of change for 1) building political will and commitment towards childhood illness, exhibited through updated policies and relevant operational documents 2) enhancing competencies of healthcare providers at health facilities and community level to take up the use of updated commodities and cutting-edge technologies for diagnosis and treatment of childhood illnesses; 3) local production of these commodities to make them cost-effective for public procurement; 4) strengthening logistics and supply chain management systems to ensure uninterrupted supply; and 5) provision of finances for procurement of these commodities to treat every sick child in Pakistan. Finally, an accountability framework was created with the assigned responsibilities, actions and associated indicators to keep track of the progress.

Political commitment and bureaucratic ownerships is critically essential for any change process in Pakistan. Summary, it is critically important that the private sector is engaged and strengthened in this war against mortality. These formal and informal factors identified are not only valid in Pakistan, but these results can be replicated anywhere for any comparable change process, especially in those LMIC countries which inherit the administrative systems of the colonial past.
Poster Abstracts

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Poster Number: 412

Pharmaceutical services in Rio de Janeiro Municipality, Brazil: development regarding selected aspects from 2008 to 2017

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Background: Brazil has advanced in the formulation of pharmaceutical policies and services throughout the structuring of the national health system, guided by the Brazilian Ministry of Health together with states, municipalities and civil society. The development of pharmaceutical services in primary health care in municipalities has been a major challenge for Brazilian managers, especially in the selection, procurement and financing of medicines dimensions. Regarding to pharmaceutical services in primary health this may impact in obtaining health outcomes and guaranteeing access to medicines. Few studies have been developed for the area of medicines in regard to the analyzes of interventions and programs derived from pharmaceutical policies, mainly in low and middle income countries. Therefore it is important develop studies aiming at to analyze pharmaceutical policies or interventions in order to increase the knowledge about its implementation process. This article aims to analyze the development of pharmaceutical services in the context of the primary health care (PHC) in the period 2008-2017, focusing on selection, procurement and financing of medicines. Methods: A retrospective study was undertaken, using as data sources administrative documents of Rio de Janeiro Municipality Health Secretariat (SMS-RJ) as well as secondary database. Results: We found a growth of numbers medicines offered for PHC of 57 items in 2008 to 175 in 2017. Actual spending on drugs paid by the city has grown 38% in the period, with a reversal from 2010, of the proportion of PHC related to tertiary care drugs, reaching 2.4 times in 2014, the year that public spending on medicines per capita of PHC was 9% greater than the value agreed between the three federal levels. Discussion/conclusions: It can be concluded that there have been important changes in pharmaceutical services in Rio de Janeiro Municipality in the period following the reform of PHC held in this territory, with increasing the conditions for therapeutic coverage and increased drug funding. The growth of per capita public spending on medicines above the agreed value raises the need to strengthen the rationalization of management measures.
The Challenge of Reaching the Poor with a Continuum of Care: A 25 Year Assessment of Philippine Health Sector Performance

Co-authors: Carlo Irwin A Panelo-University of the Philippines Manila College of Medicine; Orville C Solon-University of the Philippines School of Economics; Rebecca M Ramos-Philippine Obstetrical and Gynecological Society; Alejandro N Herrin-University of the Philippines School of Economics

The Health Policy Development Program, a policy project supporting the Philippine Department of Health and implemented by the UPecon Foundation, Inc. with funding from the United States Agency for International Development, did a long term assessment of Philippine health sector performance. The assessment revealed that from 1990 to present, the health outcomes of Filipinos have improved slowly compared to its neighbors. This is despite the steady increase in health care spending and introduction of major reforms, particularly the devolution of the public health system to local governments and the introduction of social health insurance. To date, access to health services, particularly among the poor, remains limited. Out of pocket payments still account for the largest share of health expenditures with public spending on health in per capita terms not increasing substantially from pre-devolution levels. The assessment reveals that the inability to improve health system performance can be attributed to three fundamental weaknesses of the Philippine health sector: 1) fragmented service delivery and financing owing to devolution and a largely unregulated private sector; 2) limited capacity to manage complex health reforms; and 3) lack of critical mass of scientists and researchers to generate and translate evidence into policy. For the Philippines to improve the performance of its health sector, these fundamental weaknesses need to be addressed. First, fragmentation can be addressed by consolidating the health sector at the province level through legislation. Alternatively, consolidation can be achieved by government issuing contracts to both public and private providers to deliver the continuum of care for a package of services to the population. Second, improving the management capacity of the health sector will require substantial investments in graduate training and human resource programs that strengthen recruitment, training and retention of staff, especially in the public sector. Lastly, building a critical mass of scientists and researchers will also require substantial investments in graduate training, research and collaboration among the local and international scientific community. The findings of the assessment and its recommendations can serve as inputs to the ongoing discussion and debate as the Philippines moves into expanding universal health coverage and shifting to a federal form of government. The assessment also provides updated information on the Philippine health sector and offers insights on how similar health reforms like expanding universal coverage and decentralization can be implemented in other low and middle income countries.
Inayat Kakar, Post Graduate Institute of Medical Education and Research (PGIMER)
Poster Number: 414

Theoretical perspectives on ‘power’ in health systems

Co-authors: Inayat Singh Kakar - Post Graduate Institute of Medical Education and Research (PGIMER); Manmeet Kaur - Post Graduate Institute of Medical Education and Research (PGIMER); Rajesh Kumar - Post Graduate Institute of Medical Education and Research (PGIMER)

Purpose

This paper emerged out of discussions for research on abuse and disrespect women face in health care institutions. Literature raised questions in our mind about why women face marginalisation, disrespect and abuse in health care. Theories of conflict, interaction and systems of power were reviewed. The aspects of determinants of power, the interplay of power in interpersonal relationships and the institutionalisation of power relations within systems were analysed and applied on interpersonal relations between health service provider and user.

Content

In order to understand power interplay between health service provider and user, it is important to understand interactions and structures within which interactions occur. Experiences and exposure of an individual help in defining and interpreting the social world. Individuals ascribe role expectations to themselves and to others forming the basis of individual behaviour. Interactions based on these role expectations then create organisational culture. Internalisation and performance of role expectations by many individuals creates social structures.

Mere existence of a relationship is not enough till power is translated into action. A power relation can exist in the absence of violence, and violence can be the means to establish a power relation. Power thus becomes a complicated interplay to govern the conduct of individuals. Given the historically superior status of a physician conditions of domination are ripe within health facilities. Thus reproducing power structures ingrained in society, at the level of interaction between doctors and patients.

At the service user level dominant status of service provider are internalised which then subjugates users through external and internal processes by categorising them on the basis of their individuality. External processes being those that arise out of a relationship of dependence and internal processes being those that are tied to a person’s identity and self-knowledge.

Thus, systemic discrimination on the basis of class, caste, gender, disability etc. is reproduced and becomes the ‘norm’ in health care settings.

Significance for sub-theme

In order to address marginalisation and exclusion of people from health systems, it is important to tackle power structures that affect provisioning of services, and create vulnerabilities that affect utilisation of available health services. The internalised social distance on the basis of identity of a person needs to be dismantled. Such liberation would facilitate breaking the cycle of abuse by challenging this internalised subjugation.

Target Audience

This paper is addressed to policy makers, programme level staff and individual medical practitioners.
Reflecting strategic and conforming gendered experiences of Community Health Workers using photovoice in rural Wakiso district, Uganda

Co-authors: David Musoke-Makerere University School of Public Health; Charles Ssemugabo-Makerere University School of Public Health; Rawlance Ndejjo-Makerere University School of Public Health; Elizabeth Ekirapa Kiracho-Makerere University School of Public Health; Asha S George-University of the Western Cape

Background: Community Health Workers (CHWs) are an important human resource in Uganda as they are the first contact of the population with the health system. Understanding gendered roles of CHWs is important in establishing how they influence their performance, and relationships in communities. This paper explores the differential roles of male and female CHWs in rural Wakiso district, Uganda using photovoice, an innovative community-based participatory research approach.

Methods: We trained 10 CHWs (5 males and 5 females) on key concepts about gender and photovoice. The CHWs took photographs for 5 months on their gender-related roles which were discussed in monthly meetings. The discussions from the meetings were recorded, transcribed, translated to English, and emerging data were analyzed using content analysis in Atlas ti version 6.0.15.

Results: Although responsibilities were the same for both male and female CHWs, they reported that in practice CHWs were predominantly involved in different types of work depending on their gender. Social norms led to men being more comfortable seeking care from male CHWs and females turning to female CHWs. Due to their privileged ownership and access to motorcycles, male CHWs were noted to be able to assist patients faster with referrals to facilities during health emergencies, cover larger geographic distances during community mobilisation activities, and take up supervisory responsibilities. Due to the gendered division of labour in communities, male CHWs were also observed to be more involved in manual work such as cleaning wells. The gendered division of labour also reinforced female caregiving roles related to child care, and also made female CHWs more available to address local problems.

Conclusions: CHWs reflected both strategic and conformist gendered implications of their community work. The complementary nature of male and female CHWs while performing their roles should be considered while designing and implementing CHWs programmes, without further retrenching gender inequalities or norms.
Caste Inequality in Composite Index of Anthropometric Failure in India: An Intersectional Analysis

Background: Studies that examined child nutritional inequalities in India largely focused on single axes of inequality and the few studies that did intersectional analysis of nutritional inequality by multiple axes used single indicator of undernutrition which does not capture the overall inequality in multiple indicators of undernutrition. Composite Index of Anthropometric Failure (CIAF) combines all the three forms of anthropometric failures; stunting, wasting and underweight and provides overall prevalence and severity of undernutrition. Hence, the current study uses intersectional analysis of CIAF by multiple axes of inequality such as caste, economic class, gender and place of residence to better understand the specific subgroups that are most disadvantaged.

Method: CIAF was constructed using child anthropometric data from National Family Health Survey (NFHS 4, 2015-16). Taking four main axes of inequality such as; caste (Scheduled Tribe (ST), Scheduled Caste (SC) and Other), economic class (poor and non-poor), place of residence (rural and urban) and gender (male and female) twenty-four intersecting sub-groups (eg. ST-Poor-Rural-Female, ST-Poor-Rural-Male) were made. Cross-tabulation of these intersecting groups and CIAF were prepared to analyse the caste differences and odds ratios were calculated using binary logistic regression keeping Other-Non-Poor-Urban-Male as reference category. Finally, pairwise chi-square test was performed to find the significance of caste difference in its intersection with other axes.

Result:

While 38.4%, 21%, and 35.7% of children are stunted, wasted and underweight respectively in India as per NFHS 4 survey, 55.6% of children were undernourished by CIAF and 6.7% of children have all three forms of anthropometric failure. Significant differences with upper caste advantages were observed between SC/ST as a group and upper caste irrespective of gender, class and place of residence. Between ST and SC caste, significant difference in CIAF is found only in rural area with SC advantage. ST-Poor-Male children from rural and urban residence have the highest prevalence of CIAF (71.5% and 69.2% respectively) and ST-Poor-Male-Rural children have the highest prevalence of all three form of anthropometric failure.

Conclusion: Caste and economic class are the main axis of nutritional inequality in India and ST children are most vulnerable to undernutrition. The study finding indicates the need for more focused nutritional intervention for SC and ST community in general and ST children from poor economic class in particular.
Gender Transformative Approaches to Global Health Conferences: Evidence from five Global Health Conferences

Co-authors: Mehr Manzoor-Women in Global Health and Tulane University; Roopa Dhatt-Women in Global Health; Kelly Thompson-Women in Global Health; Rosemary Morgan-John Hopkins University

Conferences provide evidence that guide health systems policy. Participation in conferences as speakers and presenters is important for academic advancement. It provides opportunities to delegates to gain visibility by presenting their work, and helps gain external recognition for faculty promotion and tenure positions. It is alarming that despite increases in the percentage of women scientists, men still present a majority of conference papers, and certain global health fields have all-male panels. The gap widens based on race, ethnicity, class, color and age of women. This study explored gender transformative strategies to reduce gender gap within global health conference panels and speakers.

This study used qualitative approach to assess the role of conference organizers in promoting balance between men and women within conference speakers and panels, and to explore the strategies they have adopted to overcome structural barriers that limit women’s participation. The sample is drawn from five global health conferences. Five in-depth interviews were conducted over virtual platform with conference organizers (four men and one woman). A comprehensive literature review was undertaken to understand the barriers that limit women’s participation in conferences and as public speakers.

Male respondents felt they had certain advantages in their careers and professional trajectories. Conference organizers in the sample believed that men and women were not perceived equally within the scientific community. Gender awareness among conference organizers as well as framing the issue in appropriate language prior to decision making helps in addressing the problem as not many people are aware of the issues of diversity.

Among the examples of enabling factors that have increased diversity at global health conferences include creating a list of potential female speakers, sending invitations specifically to women researchers, and, including emerging women researchers from regionally diverse settings. Other strategies include signing a pledge to say no to “all male” panels, discussing the issue during meetings and ensuring that organizing committees are gender diverse.

Gender parity in global health conferences can be achieved by having specific policies on gender diversity; forming gender diverse organizing committees, and, by including women’s voice in decision making. Conference organizers should publish gender and sex disaggregated data of organizing committees, speakers, moderators, panels and participants to ensure that they are held accountable. In the long run, exposure to high quality women scientists will help address the subtle biases that limits women’s participation and provide rich breadth of health systems research to guide policy action.
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Poster Number: 418

"We don't have an office. We sit under a tree" ...Implementation of a Community Health Worker Programme: Lessons from a South African District

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Background
To achieve the Sustainable Development Goals, South Africa embarked on a strategy to re-engineer the Primary Healthcare (PHC) system in 2011, which includes the creation of Ward-based Community Health Workers Outreach Teams (WBOT). Each team comprises of six CHWs led by a professional nurse. The national policy prescribes that each community (ward) has at least one WBOT so as to improve access to healthcare, thus strengthening the decentralized district health system. We explored WBOT members’ and managers’ views on implementation of the policy in the Ekurhuleni district.

Methods
We conducted an in-depth qualitative evaluation consisting of five focus group discussions and 19 in-depth interviews with CHWs and team leaders/managers respectively. Using framework analysis approach, data was coded and themes drawn as per the National Implementation Research Network’s Implementation Drivers’ Framework (which identifies competency, leadership and organizational factors as drivers of implementation processes).

Results
There were significant weaknesses underscoring the current implementation of WBOTs in the district. We found competence to perform role was compromised by poor WBOT selection and inadequate training / coaching. Within the community context, CHWs experienced both positive and negative attitudes from the community and clinic staff from inter alia: traditional beliefs; stigma; and, the perception that CHWs were increasing clinic workloads. Despite this, CHWs valued their expanded role, including referring to services beyond the clinic such a social services, police and home affairs, and felt motivated by the impact of their work in the communities they serve. Weak organizational process compounded by poor planning, budgeting and rushed implementation resulted in problems with procurement of resources, precarious working conditions, payment delays and uncertainty of employment contracts. Poor communication between teams and key actors, insufficient support for data management revealed leadership deficiencies at the national and implementation level, further compounded by confusion of the ownership of the program, and poor integration of WBOTs amongst staff and in the delivery of services. This affected the embeddedness and acceptance of the program in clinics and the community, impacting on implementation fidelity.

Conclusion
Sustainable systemic change requires clear, detailed planning guidelines, defined leadership structures, earmarked budgetary commitment, and continuous communication strategies. This study illustrates that to re-engineer PHC, to achieve the vision and values set out by the Alma Ata Declaration, and, to strengthen outreach services across essential sectors, participation of all relevant actors, with emphasis on community led governance in the policy formulation and implementation process is fundamental.
On the pursuit of Universal Health Coverage in Ghana: are the less privileged covered?

Co-authors: Jacob Novignon-Kwame Nkrumah University of Science and Technology

In the bid to achieve universal health coverage (UHC), Ghana rolled out the National Health Insurance Scheme (NHIS). This is considered the largest health financing reform in the history of the country. The primary objective of the scheme is to remove financial barriers to health care access in Ghana. While various studies have evaluated the impact of the scheme on health care access and utilization, no study has analyzed its role in bridging the inequality gap in health care access. We test this hypothesis in the current study. We sought to find out if the introduction of the NHIS has helped reduce socioeconomic related inequalities in health care access.

We used data from three rounds of the Ghana Demographic and Health Surveys (2003, 2008 and 2014). Using three health care utilization measures - Antenatal care (ANC), Delivery by trained attendants (DTA) and care for fever among children under five - we analyzed data in three steps. First we constructed concentration curves to examine the trend in inequality before and after 2004 when the scheme was established. In the second step, concentration indices (CIs) were computed for each outcome variable across the years. Finally, the concentration indices were decomposed to estimate the impact of NHIS on inequality in health care access.

The concentration curves show that utilization of ANC, fever care and DTA were concentrated among the privileged. However, the trends show the levels of inequality has declined after the introduction of the NHIS. The CIs confirm this with inequality in ANC service utilization declining from 0.302 in 2003 to 0.177 in 2014. Similarly, inequality in DTA declined from 0.597 to 0.423 over the same period. The decomposition results show that access to NHIS was an important contributor to inequality in health care access. For instance, in 2014, access to NHIS explained about 3.17% of socioeconomic related inequality in ANC service utilization. This was statistically significant at 5% level.

The findings suggest that the pursuit of UHC in Ghana has been beneficial for the poor. It has helped in bridging the health care access gap between the rich and the poor. There is, therefore, the need to scale-up the NHIS in Ghana to achieve full universal health coverage. In countries where such schemes do not exist, there is need to direct efforts to encourage its establishment.
Kenyan women’s preferences for place of delivery: A comparative study between Embakasi North sub-County and Naivasha sub-County, Kenya

Background: Many sub-Saharan African countries have introduced health policies aimed at removing barriers to health service utilization including provision of certain health services free of charge. The Kenyan Government in 2013 initiated a free maternal health policy with an aim of reducing the costs for facility based delivery and subsequently increase health service utilization to reverse the high maternal mortality ratio. Despite the health policy, women continue to deliver their women outside of health facilities and utilization patterns reflected inconsistencies with women bypassing smaller primary health facilities that had been upgraded to provide deliveries and having their babies at tertiary health facilities. Concerns still remain around the health system factors that drive the demand for certain health facilities over others for facility-based delivery and the women’s perception of quality of care within these health facilities. This study aims to fill this research gap by using an innovative research technique increasingly used in health economics called discrete choice experiments to establish the attributes of health facilities that elucidate women’s preferences for place of delivery.

Objectives: The study aims to examine women’s preferences for place of delivery and establish attributes of the health facilities that drive women to choose facilities where they deliver their babies. The study will compare preferences of women in a peri-urban context in Embakasi North sub-County with those in a mixed agrarian, pastoralist and peri-urban context in Naivasha sub-County.

Methods: The study intends to utilize mixed methods framework incorporating both a qualitative study and a quantitative methodology known as Discrete Choice Experiment (DCE) to determine the most important health facility attributes preferred by women when choosing their place of delivery.

Conclusion: This study hopes to establish the relative importance of health facility attributes valued by women particularly in the peri-urban contexts of Nairobi and rural areas of Kenya where the quality of women’s health services are often neglected and use the preference information to inform policy makers and program managers both at the county health systems and the National Ministry of Health. This information should be used for establishing health policies that provide for resource reallocation to promote health equity and efficient service delivery within health facilities in Kenya.
Who is left behind when health systems provide sub-optimal maternity care?

Co-authors: Susan Munabi-Babigumira-Norwegian Institute of Public Health; Claire Glenton-Norwegian Institute of Public Health

Background

The Universal Health Coverage agenda requires countries to provide health services that are accessible, affordable and of good quality. Whereas the coverage of maternity services in low and middle-income countries (LMICs) has greatly improved over the last decade, the quality of maternity care remains poor, and is linked to persistent high maternal mortality rates. Ensuring equitable access to good quality maternity care through well-functioning health systems remains a challenge in these settings. In this paper, we map the determinants of quality of maternity care available at health facilities in LMIC, and investigate social exclusion through mothers’ experiences of these determinants when accessing maternity care in Uganda.

Methods

We systematically searched for and synthesized 31 qualitative studies conducted in Africa, Asia, and Latin America that explored the views, experiences, and behaviors of facility-based skilled birth attendants providing intrapartum and postpartum maternity care. We conducted focus group discussions to explore mothers’ experiences of these factors when attending maternity care at lower level health facilities in selected districts of Uganda.

Results

A wide range of factors operating both at the health system level and at the individual health worker level can influence the quality of maternity care. Health workers described a lack of training, supervision and human resources. Lack of commodities also influenced quality of care and increased out-of-pocket costs for mothers and their families. When mothers were asked to bring their own commodities or for money to purchase commodities, this created mistrust, excluded some mothers from using maternity services and sometimes led to deliveries at home with unskilled providers. Poor attitudes and unethical behaviour among health workers also resulted in poor experiences of maternity care. Some mothers described harsh communication as well as discrimination of the young, unmarried, or of women who health workers perceive to be poor. This left them feeling uncared for and sometimes influenced their decision to return to the clinic or have a facility delivery.

Conclusion

Our findings suggest that poorly resourced public health systems with unsupervised, overworked health workers can influence the quality of care available. When vulnerable mothers have negative experiences and perceptions of the quality of care at health facilities, this can create mistrust and exclude mothers from utilising health services and worsen inequities. Evidence on context-specific barriers can be useful for programme managers and other stakeholders when designing quality improvement strategies for health services that ensure no one is left behind.
C-section deliveries in private hospitals: too much to pay with too difficult coping strategies for the poor families in Bangladesh Health System

Background

C-section is a surgical procedure and one of the components of comprehensive emergency obstetric and newborn care. Poorer families from low income countries most often face catastrophic health expenditures to meet up the costs related to this emergency surgical intervention. However, data regarding expenditures related to C-section deliveries and coping strategies for financial burdens differentiated by socio economic classes are minimum in developing country context where out-of-pocket remains major mode of payment.

Methods

This cross sectional study was conducted in a tertiary level private hospital in rural Bangladesh. Women who delivered by C-section between October 2016 to December 2016 (n=425), have given written informed consent were the study participants. A comparative analysis was done to document both the direct and opportunistic costs incurred through C-section deliveries along with financial coping strategies adopted by the study and comparison groups of women. The study group comprised of women coming from poor and lower middle wealth quintile families and comparison group belongs to middle, upper middle and richer wealth quintile background. For data analysis both descriptive and analytic statistics were performed. For analytic statistics, the significance of differences was evaluated by Chi-square test or student's t test depending on the appropriate type of variable.

Results

The mean age of study participants was 25 years. The facility delivery rate was low among study group than comparison group (74% vs. 77%; p<0.001). Monthly family income and expenditure were significantly lower among study group than the comparison group counterparts (p<0.001) though direct medical cost was identical for respondents from both the groups. However, direct non-medical cost and indirect cost, both were lower in study group than comparison group (p<0.001). About 77% families had saved money for bearing C-section cost. Such savings were less frequent for the participants from the study group than comparison group (59% vs. 70%; p<0.001). Over one third (39%) of the women from study group borrowed money from others as opposed to 25% of the participants from comparison group who received supports from relatives or friends to clear outstanding hospital bills (p<0.001). 57% of the study group families as opposed to 27% comparison group families borrowed money from others (p<0.001).

Conclusion

Our study conferred that poorer families had fewer savings and need to borrow money from families and friends to bear C-section service cost which is an ultimate threat for Universal Health Coverage. Innovative financing strategies are needed to ensure health equity.
Integrating Mental Health Screening into Antenatal Care Package: A Stepped Care Approach. Building Evidence from Rural India

Co-authors: Tina Khanna-International Institute of Population Sciences

Background: Low- and middle-income countries have been found to have a higher prevalence of perinatal mental health problems (10-40%). Poor maternal mental health is linked to several adverse outcomes including inadequate weight gain, preterm birth and postpartum depression. The study aimed to measure the burden of psychological distress among young pregnant women in rural India and their health seeking behavior. The study also assesses association between maternal psychological distress and IFA consumption.

Methodology: This study utilized mixed method approach: a survey of young pregnant women in second and third trimester (n=400) was conducted in rural Bihar and Maharashtra. General Health Questionnaire (GHQ-12 was used for measuring psychological distress. Qualitative interviews were conducted with Medical Officers (MOs) and community health workers (ASHA and ANM). Multinomial Logistic Regression and deductive content analysis was used for analysis.

Finding: Psychological distress was found among 40% of pregnant women. More than one third of pregnant women did not take any IFA tablets. Multinomial regression showed that IFA consumption was significantly associated with psychological distress (R= 2.95, p<0.001). Young women who were low on psychological distress had three times higher probability of recommended IFA consumption. Women with mental health problems often do not seek help, they mostly confided with their mothers or husbands about tension and stress. Also, health care providers shared that women had low mental health literacy and therefore were not able to understand their distress. Although there is lack of awareness about mental health issues among few health care providers (MOs and ANMs/ASHAs), yet all recognized importance of incorporating mental health screening into antenatal care package for early identification and treatment.

Conclusion: The existence of high levels of psychological distress and its impact on IFA consumption warrants mental health screening in the standard ANC package for pregnant women. Health care providers are uniquely positioned to assess a woman’s mental health and related indicators to optimize pregnancy outcomes. In low-resource settings, a stepped care approach is necessary to screen and provide care for pregnant women with mental health problems. Therefore it is important to train community health workers, counsellors and MOs using WHO (mhGAP) intervention modules to work at village (early registration and identification for mental health), sub-centre (referral and therapy) and primary health care (screening, treatment and management) levels. Also, raising the level of public mental health literacy can contribute to early recognition and appropriate intervention seeking behaviors.
Health System Accessibility to influence fertility: Evidence from National Family Health Survey Round 4

Co-authors: Nitin Bajpai - Population Foundation of India; Pratibha Ranjan - Independent Researcher

Overview: The Total Fertility Rate (TFR) of a population is the average number of children that would be born to a woman over her lifetime if she were to experience the exact current age specific fertility rates through her life time and she were to survive from birth through the end of her reproductive life. Perhaps more relevant to the current debate is the replacement fertility rate which is the total fertility rate in which women would have only enough children to replace themselves and their partners. By definition replacement is only considered to have occurred when the offspring reach 15 years of age. India aspires for replacement level of fertility since long, however recent round 4 National Family Health Survey (NFHS) reveals that few states out of 35 in total are registering high fertility rate. If we remove these states from the analysis the mean TFR is below 2.

Method: This study is based on secondary data generated by NHFS round four 4 Survey. The premise of the study was to understand the reduction of TFR 2.2 in NFHS-4 survey from 2.7 in NFHS-3 owing to the fact that Modern Contraceptive Prevalence Rate (mCPR) has reduced to 0.8 per cent points. TFR normally is inversely proportional to mCPR, meaning a rise in mCPR will lead to reduction in TFR. However, in NFHS round 4 TFR reduced to 2.2 but so is mCPR to 47.8 from 48.5. We chose TFR as a dependent variable to run a regression analysis on five independent variables. Independent variables taken were Institutional Birth (Birth at a facility rather than home), children aged 12-23 months fully immunized (immunization is Indian is majorly provided by public health space), Household education 10-11 years, Lowest wealth quintile (household status based on calculation of household items), and Modern Contraceptive method use.

Results: It was observed that TFR was explained better (R square value 31%) by Full immunization and Institutional birth (R square value 52%) than mCPR (R square value 27%) alone, when taken together adjusted R square was more for health system than mCPR.

Conclusion: Thus multiple regression analysis is able to explain TFR better with indicators which are related to health system accessibility. This gives rise to a new perspective that if fertility decline is a goal than health system accessibility is a more effective strategy rather than focusing on increasing Modern Contraceptive prevalence rate only.
Poster Abstracts

Narottam Pradhan, Project Concern International
Poster Number: 425

Improving maternal and child health and nutrition behaviors in Bihar, India
at scale by engaging marginalized women and their families through self-help groups.

Co-authors: Narottam Pradhan-Project Concern International; Brijesh Kumar Govindrao-Project Concern International; Sudipta Mondal-Project Concern International; Santosh Akhauri-Project Concern International; Indrajit Chaudhuri-Project Concern International

Background: Project Concern International (PCI), funded by the Bill and Melinda Gates Foundation has been working since 2012 with self-help groups (SHGs) in Bihar, India to improve Maternal and Child Health and Nutrition behaviors among poor and marginalized rural women and their families. From 2015, PCI has been working as a Technical Support Unit with a large-scale Government of Bihar livelihoods project (JEEViKA), India with over 167 thousand SHGs reaching over a million population to integrate health and nutrition. This paper presents how by a combination of behavior change communication (BCC) in SHGs and thematic community events, significant improvements in certain health and nutrition related behaviors can be achieved at scale quite rapidly.

Methodology: Measurements for BCC sessions related outcomes were through a series of cross-sectional surveys by independent and in-house measurement teams. The surveys include three quantitative surveys with representative sample sizes conducted by (a) Population council in 2013, 2014 and 2016 comparing SHG-health areas with matched non-health SHGs; by (b) CARE in 2017 and (c) by PCI in 2017. Community events were measured using (d) two rounds of cross-sectional representative sample surveys before and after the events.

Results and Significance: Through survey (a) a statistically significant increase at 10/5 percent level both knowledge and practices was observed among SHG-health areas which had BCC sessions in comparison with non-health SHGs. These included a differences in consumption of Iron-folic acid tables (10%), 12% for birth preparedness (12%), delayed bathing (24%) and skin-to-skin care of newborn (19%). Through survey (b), significant positive differences were observed in institutional delivery, timely initiation of breast feeding and dry cord care. Through survey (c) a significant difference of 14% was observed, between exposed and unexposed, for practice of Minimum Acceptable Diet among children 6-23 months children. Similarly, through a community event on Exclusive Breast feeding (EBF), as observed by survey (d) the knowledge of actual benefits of EBF among surveyed mothers increased from 60% to 65%. Correct knowledge of timely initiation went up from 65.5% to 72.4%. EBF in the last 24 hours increased from 50.2% to 60.7% between before and after the community event.

Discussion and Conclusions: The evidence reveals that health interventions when integrated into the existing non-health platforms like self-help groups and bolstered by well planned community events on health and nutrition themes, can lead to changes in certain health and nutrition related behaviors at scale.
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Poster Number: 426

Engendering Accountability: Engaging Men to Improve Maternal Health Through Changing Gender Biased Social Norms and Stimulating Active Citizenship

Co-authors: Sana Qais Contractor-Centre for Health and Social Justice; Abhijit Das-Centre for Health and Social Justice; Edward Premdas Pinto-Centre for Health and Social Justice

Background Social Accountability is increasingly gaining importance within health governance, including in the field of sexual and reproductive health. It is broadly seen as the pathway by which “communities” demand direct accountability from health systems. Much of the discussion on maternal health rights and accountability looks at the role of women as principle agents and rights holders and the health service providers as duty bearers. Men’s reproductive responsibility as partners and fathers, and for addressing patriarchal norms that jeopardise women’s health has not been included in such accountability interventions. This presentation explores the concept of engendered accountability*, a process that simultaneously transforms gender relations at the family and community level as well as stimulates active citizenship among communities to demand quality maternal health services.

Methods: The intervention as located in two districts of Madhya Pradesh, and included a combination of strategies including building leadership of male “role models”, creating peer education and support groups, stimulating collective action by men’s groups to challenge norms, community campaigns to raise awareness on maternal health entitlements, and activating local governance institutions such as the PRI and VHSCs. Intervention research adopted a combination of realist evaluation and developmental evaluation approaches. Mixed methods were used including baseline and endline surveys, in-depth interviews, FGDs, Participatory Rural Appraisal and documentation of stories of change. Results The results of the intervention show changed gender relations, gender roles and social norms at one level, and an improvement in utilization of and quality of maternal health services at another. Men’s attitudes towards gender became more equitable, participation in household and childcare responsibilities increased, and self-reported violence against partners reduced. Contraceptive use by men has increased. This was accompanied by changes in social norms such as reduction of early marriage and increased enrollment of girls in school. On the health system front, greater vigilance and negotiation with the health system led to improvement in services and greater utilization of maternal health services. Conclusions While organizing communities to demand health rights and hold the health system accountable, it is essential to address the communities’ and especially men’s own responsibility to address gender discrimination within communities and transform social norms that jeopardize women’s health. The idea of ‘engendered accountability’ proposed by this project synergises men’s increased understanding of gender and involvement in the family, with a sense of entitlement to public health services, which offers an effective approach to work on maternal health rights.
Innovations in Primary Health Care: A Realist Synthesis of Innovation Case Studies

Co-authors: Sreenidhi Sreekumar - Sree Chitra Tirunal Institute for Medical Sciences and Technology

Background: Primary Health Care is a crucial element of any health care system. Despite the availability of substantial evidence on the significance of primary health care, large gaps still persist in its functioning. Many innovative efforts are underway across the world to improve the availability, delivery as well as quality of primary health care. However there are wide variations in the achievements of these innovations. This paper attempts to understand the innovation strategies, ways of engagement and the role of contexts through a realist synthesis, to better understand how innovations are realised in varied primary health care settings.

Methods: A realist synthesis differs from traditional reviews in its approach to the literature. It begins by synthesizing the literature to find patterns of contexts and mechanisms and their influence on the outcomes. Journal articles in English language for the current study on primary health care innovations published during 1990 – 2018 were identified from databases like MEDLINE, EMBASE, Google Scholar augmented by references found in identified articles. Data were extracted on the context, mechanisms and outcome with respect to the innovations. Supporting literature related to the selected innovations were also sought. The synthesis was also informed by the Health Systems framework by World Health Organisation to better understand the innovation objectives and health system elements targeted by the innovations.

Results: The final synthesis included 15 innovation studies which attempted to improve primary health care, eight from LMICs and seven from high income countries. Innovations from LMICs primarily focussed on access and coverage, while high income countries focussed on care quality and efficiency. Overall most innovations from LMICs reported success while many from high-income countries reported partial success. There were seven single-component innovations, six on health workforce and one on Health Information Systems. Most work-force innovations failed to achieve attitudinal and behavioural changes, particularly among clinicians, and hence were less successful. Of the eight multi-component innovations, the inability to focus equally on all essential components was a factor deterring success. The synthesis noted lack of clarity around the definition and parameters of innovation-success. The paper also presents a stepwise framework on how innovations may achieve better adoption, implementation and sustenance.

Conclusion: The review highlights the need for understanding innovations not just as new changes in processes, but to examine how these processes are realised differently in different contexts owing to the influence of various micro, meso and macro level factors.
Understanding oral health systems - A case study from India

Co-authors: Venkitachalam Ramanarayanan-Amrita School of Dentistry; Chandrashekar Janakiram-Amrita School of Dentistry; Joe Joseph-Amrita School of Dentistry

Background: Oral health, though intricately related to general health, is often a neglected entity in health policy making. Oral diseases are emerging as significant public health problems due to its morbidity. High costs of treatment and non-availability of oral care at grass root levels is compounding the problem of inequity. The objectives of the study were to understand and analyse the functioning of oral health system in the state of Kerala, India and provide baseline data to convince policy makers in prioritizing oral health.

Methods: A mixed methodological approach was used to analyze the oral health system of Kerala with regard to World Health Organization's core indicators of health system assessment viz. service delivery, health workforce, health information system, access to essential medicines, health financing, leadership and governance. Data sources included government documents, reports, websites, data from epidemiological studies, facility survey of health centers, key informant interviews and information obtained from RTI appeals.

Results: Oral disease burden in the state is high. A review of epidemiological studies conducted in Kerala suggests that the prevalence of oral diseases is high with dental caries prevalence at age 12 ranging from 37% - 69%. The state has a dentist-population ratio of 1:2200 which is well within the prescribed ratio by WHO (1:7500) which can be primarily attributed to the high output of graduates from dental teaching institutions. In contrast, only 2% of dentists in Kerala work with the government sector which caters to only 6 lakh of the approximately 3.34 crore population of the state pointing to the absence of oral care in first contact levels like primary health centers. Service delivery is chiefly through the private sector and payment for dental care is predominantly through out-of-pocket expenditure. There is lack of effective implementation of National Oral Health Policy.

Conclusion and Discussion: The oral health system of Kerala is skewed in terms of manpower availability and service delivery. Oral health has not garnered enough political priority to bring about radical changes in the delivery of oral care. Integration of oral health with general health programs like Non-Communicable Diseases is the need of the hour. SWOT analysis reveals that Kerala, inspite of its strengths, needs to focus on many key areas to combat the rising burden of oral diseases, mitigate inequities and make oral care universally available, accessible and affordable.
Trust is the engine of change: A conceptual model for trust building in health systems.

Co-authors: Mary B Adam-AIC Kijabe Hospital; Angela J Donelson-Donelson Consulting, LLC

Purpose: Existing health systems frameworks examine trust, but they do not explore underlying mechanisms that build or sustain it. We propose a model to understand and measure trust building.

Focus/content: Supporting sustainable positive change and advancing gains in maternal and child health is at the center of the sustainable development goals (SDGs). The relational nature of the health system and people’s trust in it contribute to one’s access to care and adherence to recommendations. Researchers have become increasingly interested in how trust is built in the health system, but existing frameworks encompassing qualitative measures, social networks and social accountability do not explore underlying mechanisms that build or sustain it. We examine trust at the theory level as an engine driving sustainable change, using a measurable dimension of the trust construct: reciprocity. Reciprocity enables stakeholders in health systems to “try out” their interactions with less risk to calibrate their level of effort, time, and emotional investment before continuing further. Reciprocity includes three measurable elements: norms furthering equitable and healthier communities, mutual self-interests and gratitude/indebtedness.

In health systems, reciprocity enables less powerful actors to define and act upon what they contribute to it, not just what they receive, and it enables community health workers, households and health facilities to calibrate relationships for pursuit of self-interests. Understanding the cycle of reciprocity in human relationships and its iterative partner in Plan-Do Study-Act cycles opens a way to measure trust that improves on previous work in human centred design social accountability, and traditional monitoring and evaluation frameworks.

Significance for the sub-theme area: A better model of trust building in health systems is needed. This is important for building people’s trust in it, in order to improve access to care and changing health behaviors. It is also important for understanding how to make positive change at multiple levels in the health system, from the policy/federal levels to the community level.

Field-building dimension of relevance: Conceptual research in health systems; trust; social capital.

Target audience: Health system researchers, emergency (disaster) responders, and prevention and development organizations who need simpler and more immediate or short-term measures to assess the impact of their interventions and potential for sustainability.
How health systems address complexities - a theoretical discussion based on simulation exercise

Co-authors: Joao Gutemberg Costa-Swiss Tropical and Public Health Institute

At the intersection of complexity science and systems thinking a range of questions arises on how systems respond to complexity in its environment and what are the foreseeable outcomes of those responses. In this paper we highlight first the need to be clear about the distinction between complexity and systems. Subsequently we argue that independent from the strategies a system may adopt, systems cannot transform complexity in their environment into simplicity. The elements and relations between them that make an environment complex are not entirely amenable to systems' intervention. Rather, systems' interventions may bring additional complexities to their environments. Therefore, we argue that the system itself has to become more complex in order to deal with its complex environment. We construct our argumentation based on the Systems Theory formulated by Niklas Luhmann. The basis for our discussion is a simulation of an outbreak of a flu epidemic in Switzerland for which the complex network of factors and expected health interventions were comprehensively mapped and used for building a stochastic model of the epidemic profile. The modeling allowed to take into account the complexity of the outbreak as well as the complexities of the interventions the health system would need to implement to contain it. The paper explains the modeling exercise and the complex relations among the array of variables involved. In conclusion, this study seems to corroborate the understanding that the health system itself would need to become more complex to adequately respond to the complexities of an outbreak. This understanding of the relation between complexity and health systems is conceptually consistent and therefore highly relevant for all engaged in projects and programs to strengthen health systems.
How to Study Unintended Consequences of Complex Health Interventions

Co-authors: Anne-Marie Turcotte-Tremblay-University of Montreal Public Health Research Institute; Manuela De Allegri-Heidelberg University; Idriss Ali Gali-AGIR; Valéry Ridde-IRD Université Paris Descartes

Background: Complex health interventions often trigger unintended consequences that go well beyond the targeted objectives elaborated by program planners. These unintended consequences are defined as changes that occur in a social system for which there is a lack of deliberate action following the implementation of an intervention. Despite their importance and widespread nature, unintended consequences are generally neglected in research protocols and program evaluations. To illustrate this, Patton humorously referred to unintended consequences as “what-we-will-do-after-everything-else-is-done”. This shortcoming is partly due to the difficulty of predicting and measuring unintended consequences. The purpose of our presentation is to explain how researchers and program evaluators can better study the unintended consequences of complex interventions in global health.

Methods: This presentation is based on our extensive experience developing and conducting a multiple case study on the unintended consequences of a complex health intervention in Burkina Faso. Examples from our research project will be used to illustrate how to study unintended consequences, as well as the lessons learned and challenges encountered. A review of relevant theories in social science and empirical research will inform our analysis.

Results: A number of theories can be useful to help researchers study unintended consequences of interventions. For example, Rogers’ theory on the diffusion of innovations provides a classification of the different types of consequences which can guide researchers/evaluators throughout their work. Due to the exploratory nature of this research topic, we found that casting a wide net during the data collection was useful to seize relevant data. Researchers/evaluators cannot foresee all of the unintended consequences when developing their protocol so they should remain flexible and open during the data collection. For example, our interview guide had to be adapted and refined as unintended consequences became perceptible overtime. Moreover, we found that conducting observation over a long period of time allows researchers/evaluators to develop trusting relationships with participants and to witness them within a more natural context, thereby going beyond hidden behaviours and attitudes. One important challenge was to distinguish between intended and unintended consequences during the data analyses as this classification may vary depending on the standpoint of the stakeholders (e.g., program planners vs street-level workers).

Conclusion: Theories and methods to understand the unintended consequences of complex health interventions exist. Researchers and program planners should increasingly attempt to understand unintended consequences in order to judge the overall value of global health interventions.
Analysing disrupted reproductive health systems: A case study of Sudan

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Background: Reproductive, maternal and child health (RMCH) indicators in Sudan are among the worst in the region. Decades of internal conflicts, geopolitical instability, and economic sanctions have contributed towards a weakening of the health system. In addition, the secession of the South resulted in a loss of 75% of the country's oil revenue creating a 30% gap in the national budget, and a 9.8% health expenditure resulted in false inflation and catastrophic out-of-pocket expenditure. In the year 2013, a universal health coverage (UHC) expansion programme was adopted to achieve Health for All in the SDG era. Among other things, this programme sought to train of an additional 14,000 community midwives. The current study sought to identify the major barriers and facilitators to achieving RMCH-related SDG targets in Sudan.

Methods: The current case study employed a desk review of national documents, reproductive health policies, strategies and laws published over the course of the last decade. The desk review was complemented with key informant interviews from policy makers, Director Generals of RMCH, PHC, HRDD and Nursing and Midwifery from Federal and State Ministries of Health, RMCH training bodies and instructors, professional unions, OBGYN specialists and HRH and RH national experts. Furthermore, RMCH stakeholder analysis was conducted.

Results: The reproductive health system in Sudan suffers from severe fragmentation. The main providers of reproductive health care in Sudan include the Ministry of Health (through the public system) and the Ministry of Social Welfare (through the National Health insurance Fund). However, RMCH is also provided by the military, the police corps, and INGOs, in addition to the informal health systems (i.e. traditional healers), with a greater use of traditional birth attendants in conflict-affected states. Despite the deployment of additional community midwives, the shortage of health workers, skill-mix imbalances, geographical misdistribution, scarcity of resources, contradicting health policies, and poor working environments negatively influencing health worker retention and outward migration are still among the challenges facing the RMCH workforce.

Discussion/conclusions: Despite the progress in numbers of reproductive health cadres produced as part of the UHC expansion programme, the availability, accessibility, acceptability and quality of care provided by RMCH workers still varies. Health labour market imbalances characterised by weak deployment policies, States ministries of health's inability to absorb cadres despite the need, dual practices, and weak performance management system further present challenges to achieving UHC.
Health for all? A qualitative study of health services provision amidst structural violence in migrant camps in northern France

Co-authors: Benita Pursch-King’s College London; Alexandra Tate-King’s College London, Faculty of Medicine; Helena Legido-Quigley-National University of Singapore; N Howard-LSHTM

Background

Of the millions of EU immigrants, France has become host to approximately 368,000 ‘persons of concern’; a UNHCR umbrella term for refugees, people in refugee-like situations, asylum-seekers, stateless, and internally displaced people. While some plan to settle in France, others stay temporarily while trying to reach their intended destination. Despite relatively small numbers, they are the subject of contentious political debate in France, with the ‘seemingly insurmountable issue of migrant camps in northern France’ a key debate in the 2017 presidential election. The responsibility of receiving and supporting these migrants falls to local governments. In northern France, a stronghold of the Front National party, this has typically meant anti-migrant policies and government intolerance. This study aimed to explore provision of health services to migrants in Calais and La Liniere, through a structural violence lens, to contribute to discourse on the effects of structural violence on the functioning of non-state service providers and the engagement of migrants in precarious conditions with health services.

Methods

Semi-structured key informant interviews were conducted with 20 non-governmental service-providers, 13 who had worked in Calais and 7 in La Linier migrant camps. Data were analysed thematically, using manual line-by-line coding.

Findings

Themes that emerged from analysis were: (i) manifestations of structural violence, (ii) structural barriers to state and non-state health and welfare services, and (iii) the effects of structural violence on material and non-material social determinants of health, and the tension between those two. To maintain a balance of services provision, NGOs developed techniques of coordination, adaptability, flexibility, and stability through which they provided semi-stable services in an ever changing and insecure environment. Providers expressed mixed views about the impact of their services on the lives of migrants. Although participants saw the overall provision of services as beneficial, they voiced concern about emerging issues of dignity and disempowerment and how humanitarian aid exacerbated these issues.

Conclusions

The role of NGOs in providing migrant health services in France is complex. While the services themselves are imperfect, findings suggest that NGOs are also working within a context of structural violence exerted by the French state, which affects the ways services can be provided and imposes barriers that negatively affect the health and wellbeing of migrants.
Labouring Bodies, Migrant Selves: Narratives of Unmet needs and Discontent with Public Health Care Facilities

Co-authors: Sabina Singh-Jawaharlal Nehru University

Background: The paper is based on an ethnographic study carried out in rural Punjab. The selected village in Punjab represented a case wherein families from Uttar Pradesh migrated to work as agricultural labourers. An attempt was made to understand as to how their migrant status, work and living conditions, the role of the intersection of gender and migrant identities during pregnancy and childbirth differentially affected their health status compared to the native population. Also, their utilization pattern and access to health care facilities during their stay in the study village were studied to understand the constraints of varied nature.

Methods: A census survey of the migrant population in the study village was carried out to assess their socio-economic and demographic composition and health problems. On the basis of data collected during health survey of the migrant population in the study village, migrant men and women were purposively selected for in-depth interviews regarding their experiences of health care services during accident/injuries, diseases, pregnancy and childbirth, immunization and family planning services, to name a few. A thematic analysis of narratives of ill-health and treatment was carried out.

Findings: Most participants acknowledged their migrant status as one of the prime constraints in getting an equal treatment at public health care facilities. They reported discrimination at public health care facilities, largely due to their appearance and untidy clothes. The long waiting queues and the resultant loss of days of work, unavailability of drugs and medicines at public hospitals, also deterred them from accessing public health care facilities. The timings of private clinics beyond work hours and the relatively humane treatment were cited as the reasons for preference over public health care facilities.

Discussion: It follows from the narratives that internal migrants constitute a vulnerable group whose health needs are not met satisfactorily by public health care facilities. It thus appears that in the neo-liberal regime, migrants are identified as rational economic beings with the agency to migrate. However, their labouring bodies and the effect on their health is often not acknowledged, and the same gets reflected in the official documents. There is no mention in the National Health Policy 2017 as to what inclusive practices will be followed to provide health care facilities to vulnerable groups. Unless the larger questions related to work and living conditions of migrants are addressed, the universal coverage of health will be a distant dream.
Private hospital care in Mongolia: compensating for public health sector failures, but at increased financial risk for Mongolia’s marginalized communities

Co-authors: Uranchimeg Tsevelvaanchig-The University of Queensland, Australia; Hebe Gouda-World Health Organisation, Geneva; Peter Hill-The University of Queensland, Australia

Background: Moving a mixed health system towards Universal Health Coverage (UHC) is a regulatory challenge for developing countries. In Mongolia, despite high population coverage of national mandatory health insurance (HI), the rapid increase of out-of-pocket payments as a proportion of total health expenditure (from 12% in 1995 to 41% in 2014) is a threat to ensuring universal financial protection. This study examines who uses for-profit private hospitals in Mongolia, and why, and explores the financial risks associated with that care, to understand what changes need to be made to effectively regulate the contribution of private hospital care to UHC.

Methods: The study uses a case-study approach employing both qualitative and quantitative methods, analysing national hospital admission records for 2013 (n=664,952) and 45 in-depth interviews.

Results: The Mongolian experience shows that financially disadvantaged and rural patients make up the majority (60%) of inpatients in private for-profit hospitals (n=87,045). Importantly, for those who live in rural locations—including those who are classified as disadvantaged, admission to private hospitals was not always their preferred choice. Barriers for accessing public services, poor referral between rural and urban public hospitals, the shift of qualified specialists from the public to the private sector, and rent-seeking behaviours of dual practices forced them to seek admission to private hospitals, despite the resulting high out-of-pocket payments. Although most (80%) private hospitals are fully integrated into the HI, private hospitals that are affiliated with the HI charge much higher out-of-pocket payments than public hospitals (USD $172 vs USD $4) because of their lower reimbursement rate and no regulated cap fee limits. This average out-of-pocket cost is calculated as unaffordable for average-income Mongolians, especially for rural and financially disadvantaged patients, putting them at risk of catastrophic expenditure burdens despite insurance coverage.

Discussion/Conclusion: Research findings reinforce the importance of integrated management and financing of public and private services to achieve universal financial risk protection. Without addressing failures in the public system, regulations targeted to the private sector alone are insufficient to protect disadvantaged people from the financial risks associated with higher out-of-pocket payments. The private sector already plays a significant role in Mongolia’s health system, but integration into the national health system in ways that protect patients requires better regulation: setting realistic reimbursement rates applicable for all hospitals as a requirement for health insurance reimbursement, and transparency through price schedules or capping the fees of private hospitals covered by health insurance.
Ensuring no one is left behind in health systems development: Community engagement a critical step in rebuilding trust in the Liberian health system

Co-authors: Georgina V. Kparteh Zawolo-University of Liberia, pacific institute for research and evaluation

Introduction

Liberia’s health system is recovering following prolonged conflict and humanitarian crisis. Access to health care is frequently lacking, particularly in rural areas, and following the Ebola epidemic, trust between communities and the health systems broke down. Strengthening the health system to promote trust and ownership of health interventions in Liberia is essential to ensure adequate health and social protection for all. Through a case study of the neglected tropical disease (NTD) programme, that prioritizes the perspectives of vulnerable individuals, this abstract focuses on understanding best practices for re-engaging rural populations in health interventions in Liberia.

Methods

Forty-one in-depth interviews and twenty-one focus group discussions were conducted with people affected by NTDs within rural communities in two counties in Liberia. We elicited community perceptions around how community ownership and engagement with mass drug administration campaigns could be enhanced. Sampling was purposive to ensure maximum variation in age, gender, ethnicity and socio-economic status. Current interaction with NTD programmes was also considered to include individuals who accepted, refused or who were missed by previous campaigns. A framework analysis of the data was completed using an intersectional lens.

Results

Several factors shaped how communities engaged with health interventions in this context, including: poor intervention awareness; intervention timing or location meaning some parts of the population were missed, particularly men who were absent from their household due to livelihood activities, pregnant women, who were ineligible for the intervention at time of delivery, were never followed up; fears regarding side effects of medicines; and health communication methods that are unresponsive to cultural beliefs of the community. Participants have innovative solutions to overcome these barriers, specifically: collective health awareness with active participation and drama; strengthening links between one off health interventions and the health facility; utilizing people they trust within the community, e.g. community health workers to deliver awareness messages; and ensuring adaptation and permanency of messaging to ensure no one is missed.

Discussion

When appropriate health communication is not achieved, people often disengage from, or are left behind by health interventions and lose trust in their health system. Community engagement approaches need to be context specific and tailored the most vulnerable. In a country like Liberia, that is fragile with deplorable road conditions, the role of communities in the design, develop and implementation of health communication and interventions is a critical first step in rebuilding trust between the health system and its population.

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Introduction: Financial protection from the risks of ill health is considered as an important performance goal of any health system. This type of financial protection involves minimizing Catastrophic Health Expenditure (CHE), which is recognized as an important outcome indicator to monitor the progress toward Universal Health Coverage as part of the Sustainable Development Goals. Yet, there is no analysis of the incidence and the determinants of CHE in the Gaza Strip. This study aims to examine the determinants of changes in CHE endured by the Palestinian households in the Gaza Strip between 1996 and 2011.

Methods: I analysed the data of ten rounds of the Palestinian Households Expenditure and Consumption Survey, which was conducted in 1996-8, 2004-7 and 2009-11. Out of pocket payments on healthcare were considered catastrophic if they exceeded 10% of households' total expenditure, or 40% of households' non-food expenditure. Logistic regressions between the dependant variable (DV), i.e. the occurrence of CHE at both thresholds, and the years of the survey; then with multiple Independent Variables (IVs) (year of the survey, availability of a child or an elderly, sex and literacy of households heads, and households per capita expenditure quantiles) were performed.

Results: The incidence of CHE at the threshold of 10% of households expenditure increased from 4.7% in 1996 to 5.1% in 2011 (P=0.012), and it decreased at the threshold of 40% of non-food households expenditures from 2.1% to 1.6% during the same period (P= 0.61). Households with at least one child had less chance of CHE (Odds Ratio [OR 95% Confidence Interval (CI)] = 0.699 [0.561-0.871]; P= 0.001 at 10% threshold and OR 0.505 [0.359-0.709]; P=0.001 at 40% threshold) while the availability of at least one elderly increased this chance (OR= 1.396 [1.124-1.736]; P=0.003 at 10% threshold, and OR=1.56 [1.189-2.291]; P=0.003 at 40% threshold); and that households from the highest expenditure quintile had higher chance to have CHE than the lowest expenditure quintile (OR =2.091 [1.565-2.793]; P=0.001 at 10% threshold, and OR=1.88 [1.197-2.953]; P=0.006 at 40% threshold).

Interpretation: Using different thresholds of CHE lead to different levels of changes in the CHE over years; hence, agreement on the threshold used to monitor CHE is methodologically important. The levels of changes in the occurrence of CHE in the Gaza Strip from 1996 to 2011 could be explained by the availability of a child or an elderly in the households and their expenditure quantiles.
Dancing Yaya’s - In Uganda Older Persons take their Health and Happiness in their Own Hands.

Co-authors: Arthur Namara Araali-HENU; Marlou De Rouw-The Constellation

In the short movie Dancing Yaya’s older persons in Entebbe tell and demonstrate how they have decided to count on their own strengths and resources first when it comes to their health and wellbeing. Using the Community Life Competence Process (CLCP) the elderly considered what their dream for their older days would be. Now, they undertake joint action and live their dream of being 'happy and healthy older persons' by implementing self defined practices. They all grow fresh vegetables in their garden so that they always have access to healthy food; they exercise collectively and individually ('we have our homework!'); the retired nurse monitors the blood pressure of her peers. The gatherings also serve as moments of healing, overcoming trauma from HIV, war and famine. The community creates their own income to support their joint activities, for example through making environmental friendly bricks and weaving mats.

Facilitators of HENU are accompanying the elderly as they go through the CLCP. They provide them with information and knowledge and they also link the older persons to existing services and health care systems. Resources that are mobilised from outside, come as complementary to the communities' own resources.

'Dancing Yaya’s' is an episode in the series of short documentaries made for the As You Open Your Eyes Project of The Constellation. The project wants to shine a light on local communities the world over who are demonstrating that another way of relating to each other and to our global challenges is possible. The yaya’s (older persons) from Entebbe serve as an example to their peers elsewhere in the world in how they overcome loneliness, poverty and health challenges.

The Uganda episode, with beautiful images and even more beautiful people, is currently under final edit and will become available end March 2018. We are attaching the link to the trailer of the full As You Open Your Eyes project to bring across the spirit of the message.
A Systematic Evidence Map of Knowledge Translation Mechanisms, Outcomes, Facilitators and Barriers in African Health Systems

Co-authors: Amanda Edwards-University of Cape Town; Virginia Zweigenthal-Western Cape Provincial Department of Health/University of Cape Town; Jill Olivier-University of Cape Town

Background: The need for research-based knowledge to inform health policy is a chronic global concern impacting health systems functioning and impeding the provision of quality healthcare for all. Efforts to increase the uptake of health research into policy have led to significant growth in the field of knowledge translation (KT). While progress has been made towards understanding KT mechanisms, these efforts predominantly focus on strategies that target the global North. As attention shifts to the Sustainable Development Goals with their emphasis on locally-led research and policy development, there is an increasing need to understand KT mechanisms as they function in the developing context of African health systems. This paper provides a systematic overview of the literature on KT mechanisms employed by health system researchers and policymakers in African countries.

Methods: This systematic review study was conducted during 2017. Evidence mapping methodology was adapted from the social and health sciences literature and used to generate a schema of KT mechanisms, outcomes, facilitators and barriers. Four reference databases were searched and resulting studies screened according to specified inclusion/exclusion criteria. A searchable database containing a final list of 62 eligible studies was compiled using Microsoft Access. Frequency and thematic analysis were used to report study characteristics and to establish the final evidence map.

Results: The literature on KT in African countries is widely distributed and growing, tracking similar trends in health research more broadly. However, significant disparities exist between countries and there are many settings without published evidence of local KT characteristics. The lack of KT research was particularly evident in post-conflict and fragile states. These findings support ongoing calls to boost local research capacities in LMICs. Commonly reported KT mechanisms across studies include policy briefs, capacity building workshops and policy dialogues. Barriers affecting researchers and policymakers include insufficient skills and capacity to conduct KT activities, time constraints and a lack of resources. Availability of quality locally-relevant research was the most commonly reported facilitator. Limited KT outcomes reflects persisting difficulties in outcome identification and reporting.

Conclusion: This study has identified substantial geographical gaps in knowledge on KT in African health systems and emphasized the need to generate additional high-quality evidence relevant to local contexts. The final evidence map provides a user-friendly product for African health system researchers and policymakers that can be used for local decision-making to enhance KT in policy and practice.
Effect of National Health Insurance on Out-of-Pocket Healthcare Payment: Evidence from A Five-Year Study of Seven Districts in Northern Ghana

Background: Ghana launched a national health insurance program with the goal of removing the impoverishing effects of direct out-of-pocket healthcare payments and ensuring a progressive move towards universal health coverage. After 12 years of implementation, there exist mixed evidence as to whether Ghana’s insurance program is serving its objective of removing financial barriers to healthcare. This paper contributes to filling this knowledge gap by using health facility-based data to assess out-of-pocket healthcare payment and health insurance claims in the era of the national health insurance in Ghana.

Methods: Revenue data accruing to public primary healthcare facilities in seven districts were systematically collected over a five-year period (2010-2014). Revenue accruing from out-of-pocket payment and health insurance claims for health services, medications and obstetric care were examined. Furthermore, the percentage change in revenue from both sources was determined using 2010 as base year.

Results: There was a steady reduction in out-of-pocket payment for healthcare. Out-of-pocket payment for health services reduced by ~63% while that of medications reduced by ~62% between 2010 and 2014. There was no recorded out-of-pocket payment for obstetric care services within the period. Health insurance claims for services and medication however increased by 37% and 34% respectively in 2013 and increased by 13% and 9% respectively in 2014. Obstetric care was entirely covered by health insurance. It was observed that insurance claims for obstetric care increased by 92% and 75% for 2013 and 2014 respectively.

Conclusion: Revenue from health insurance claims to health facilities increase steadily while that of out-of-pocket payment decreased progressively. This evidence is an indication that Ghana’s national health insurance program is significantly contributing to removing financial barriers to accessing healthcare in Ghana.
Fitsum Girma, Ministry of Health
Poster Number: 441

The potential of Private services in Public hospitals: Assessing Effectiveness

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Background: One of the principal components of the health care financing reform of Ethiopia is the establishment of private wing services in public hospitals. The main objective of the private wing establishment was to motivate and retain health workers especially physicians. It was also designed to improve the quality of services, to mobilize additional resources and to provide alternative access for clients. Objective: This study was conducted to assess the effectiveness of the private wing arrangement of St. Paul Hospital in achieving its objectives.

Methods: The study was conducted in St. Paul Hospital, Addis Ababa, Ethiopia from December 2015 to January 2016. Qualitative methods of data collection including focus group discussions, key informant interviews and document review were used. A total of 37 participants were included in the study. The discussions were conducted with specialist doctors, nurses and anesthetists. The key informants were members of the hospital management team. Consent was obtained from all participants before the start of data collection. After data collection, all data were transcribed verbatim, typed and stored safely. Then content and thematic analysis was conducted.

Results: Most of the respondents mentioned that the private wing arrangement had contributed to the motivation and retention of specialist doctors in the hospital. The number of specialist doctors in the hospital increased over the 6 years after the establishment of the private wing from 30 to 67. The quality of the private wing services was found to be a bit better than that of the regular service in that clients had the opportunity to choose a particular specialist to get service from with significantly shorter waiting time. The access to health services had been expanded for those who can afford to get services from the private wing. The estimated annual income generated to the hospital by the private wing arrangement increased from 583,578.18 Birr in 2009/10 to 1,939,912.2 Birr in 2014/15.

Conclusions: The private wing establishment in St. Paul hospital has achieved its objectives in that it motivated and retained specialist doctors, generated revenues for the hospital and improved access to services. Other public hospitals may learn from the experience of St. Paul hospital and consider establishing private wing medical services.
Emerging Lessons from the development of Community Volunteer Management Guideline and Toolkit in Nigeria

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Introduction: Community-led and participatory governance is important not just to achieve immediate health outcomes but also in strengthening health systems and ensuring sustainability and their accountability to the population they serve. The role of the formal community health workers in ensuring improved health outcomes in resource-constrained and developing settings is well documented in the literature. However, the invaluable contributions, the learnings and innovations of the informal community social service workforce who mostly serve as volunteers is lost owing largely to the absence of standard management procedure and guide that links them to the overall health systems.

Method: The USAID-funded Coordinating Comprehensive Care for Children 4Children project adopted an evidenced-based and bottom-up approach that involved gap assessment which was supplemented with scooping visits to selected civil society organizations (CSOs) across Nigeria and desk review of literature; all of which informed the development of the community volunteer management guideline and toolkit for use by the 17 PEPFAR OVC Implementing Partners in Nigeria.

Lesson Learnt: The highlight of the rigorous and engaging process reveals that an effective and sustainable community volunteer management cycle that links to other health systems and improves health outcomes follows a sequential pathway – forecasting/planning, recruitment, induction/skills appraisal, initial capacity development (training), field operations, performance review, rewards/recognition, exit management while continuous capacity development, motivation and monitoring and supervision are on-going throughout the cycle. It also shows that strengthening community volunteerism feeds into the formal social service workforce systems; linkage that in turn promotes effective community participation.

Next Step: The project is working with PEPFAR Implementing Partners in Nigeria to roll-out and field test the guideline and toolkit. This roll-out exercise will be monitored to assess whether it has the desired impact of improving synergy between the community social service workforce and the formal health systems.
The implications of a series of public sector health worker strikes for health system resilience in Kenya: insights and lessons from Kenya

Background: Working towards health systems that deliver for all requires health systems to be able to adjust to and learn from routine challenges and acute shocks. The literature and our past work suggests that the everyday health system resilience required is nurtured by developing the internal organisational capacities that allow health system functioning to be preserved and even strengthened in the face of these stressors, or challenges. However a deeper understanding of the range of stressors faced by key actors and institutions in the system, the strategies that are adopted to cope with these stressors and the implications for organisational functioning is needed. We will share our learning on everyday health system resilience in the face of a major shock for the public health system in Kenya: a series of public sector health worker strikes that lasted for much of 2017.

Methods: Towards the end of the strike and in the first few months after it ended, we conducted interviews with county and sub-county level health managers, community representatives, facility in-charges, and representatives of private facilities and non-governmental organisations. These interview data were enriched by our longer term observations and interviews conducted as part of our ‘learning site’ work in Kilifi county, where we have been working collaboratively with health system managers over the last 5 years to understand and strengthen day-to-day health system governance.

Results: We will draw on a conceptual framework we have developed with colleagues in the RESYST consortium to share our strike-related findings. Specifically we will describe the range of responses the sub-national managers undertook to keep priority activities and services open, including motivating and reorganising staff, drawing on existing relationships with non-governmental organisations for support, and building new agreements with private facilities. We will discuss whether these strategies were absorptive, adaptive, or transformative, the range of organisational capacities drawn upon (behavioural, cognitive or contextual), and the implications for organisational functioning. In addition to indications of everyday resilience in the face of a strike, we will highlight strategies that suggest some maladaptation of the system; where equity in access to basic health care is undermined in the long term.

Conclusion: We will conclude with the implications of the conceptual framework and our empirical findings for policy, practice and research aimed at ensuring that health systems are moving towards universal coverage; at ensuring that nobody is left behind.
Assessing Models of Purchasing Tertiary-Care from Private-Sector through a ‘Strategic Purchasing’ Lens - A Study of Public-Private Partnerships in Critical Cardiac-Care in Central India

Co-authors: Samir Garg-Tata Institute of Social Sciences

Background: National Health Policy of India 2002 proposed private-sector involvement for improving access to tertiary care. The current National Health Policy, unveiled in 2017, reiterates this and further proposes ‘Strategic Purchasing’ as the means. Many Indian states are purchasing Critical Cardiac Care from private sector using varying models of Public-Private Partnerships (PPPs) or Insurance. There is a need to assess the comparative experience of different models that emerged since year 2002 and how they measure up to the concept of ‘Strategic Purchasing’ in 2018. Methods: A study was carried out of PPPs that took place in central Indian state of Chhattisgarh for provision of Critical Cardiac Care. All PPPs started in the state since year 2002 were mapped. A Case Study was prepared using analysis of contract-documents, programme data, monitoring reports and qualitative interviews with senior government-implementers, mid-level managers, patients and providers. The different models were assessed using the lens of ‘Strategic Purchasing’. Results: Three kinds of ‘purchasing’ models emerged: a) State provided free land for a Private Hospital and did not expect any concession in return - Most of these failed as hospitals never got started despite land-transfer. One exception was a Non-Profit which provided free services even without the contract demanding it. b) State provided free land and capital cost for a Private Hospital and expected subsidized treatment to be provided to the poor – The PPP continued for 14 years but did not provide the concession in services to poor. It continued till the wealthier patients shifted to other providers. c) State empanelled private hospitals and paid them package-rates for pre-approved poor patients – It was relatively more functional model, was able to cover urban cases but faced challenges of quality. Each model emerged in response to a perceived societal-objective that policy makers assumed at the time. Government’s share in capital-investments declined as private sector expansion took place. Purchasing was in response to population’s health-needs but failed to create incentives for performance, equity and quality. The state is yet to have a reliable mechanism of providing affordable critical cardiac-care to its poor. Conclusion: ‘Strategic Purchasing’ provides a useful framework for evaluating PPPs and other contracting mechanisms. Further studies of Insurance based models for Tertiary Care should be undertaken to fully understand the ‘purchasing puzzle’ in order to gather necessary evidence to guide policy in India, especially in states with under-developed health-systems.
Evaluation qualitative d'une intervention communautaire contre le paludisme au Burkina Faso : contribution des acteurs non étatiques pour l'accès universel aux soins de santé primaires

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Introduction/Contexte
Le paludisme est la première cause de morbidité et de mortalité au Burkina Faso. D'où la mise en œuvre par l'Etat burkinabè depuis les années 1990 de programmes afin d’accroître l’offre de prestations, l’accès financier aux services de santé et le passage à large échelle d’interventions communautaires associant les organisations non étatiques.

Cette communication porte sur une évaluation qualitative de l’implantation du passage à l’échelle nationale du traitement communautaire contre le paludisme grâce à un partenariat public-privé non formellement évalué et capitalisé jusque-là.

Méthode

Résultats

Discussions/Conclusion
Drivers and consequences of catastrophic health expenditure in Afghanistan: a mixed-methods study.

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Background: Despite much progress in public health and Universal Health Coverage since 2001, including the introduction of basic and essential packages of healthcare that are free of charge, unequal access to healthcare remains pronounced. This study analyses the factors affecting access to care and catastrophic health expenditure: care-seeking practices, the averages of out-of-pocket expenditure (OOPE) on health per wealth group and in total, client perception of care and access barriers, the strategies that households employ to source the funds to pay for care, and the existence of local risk-pooling mechanisms. Methods: A mixed methods approach with qualitative and quantitative research methods was used. Data from Focus Group Discussions in three Afghan provinces, was triangulated with data from a nationally representative household survey, both conducted in 2015. The household survey is based on a multi-stage random sample of 23,137 households across all 34 provinces of Afghanistan. Results: The findings suggest that the conditions for catastrophic health expenditure in Afghanistan are present. Private health providers, which is the choice for half the respondents seeking care, and the costs of pharmaceuticals charged by them are an important driver of OOPE. Risk-pooling initiatives for health were scarcely found in the sampled provinces. Instead, debts and the sale of possessions feature prominently as strategies to source the funds for OOPE. 48.4% of hospitalized people reported a financially distressed situation as a result. 7.5% of those who were ill did not seek care because of cost considerations. Quality, affordability and reachability of care featured among main healthcare-related concerns, exacerbated by insecurity, particularly for women. Conclusion: In a context of poverty and high insecurity affordability of care remains a major concern for Afghan citizens. Based on these findings the following recommendations can be made: More effective regulatory oversight of the pharmaceutical supply chain and private sector could help to reduce misappropriation of drugs in the public system for private ends. The performance contracts for NGOs could have a stronger weighting of drug availability and access, and in isolated settings private providers could be contracted to provide essential medicines. Lastly, investments in community health workers, ambulances and e-health are recommended to improve access.
Community based social innovation for healthy ageing? evidence from middle- and high-income countries

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Background

Globally, countries need to adapt health and social care systems to meet the complex needs of older people. This is particularly challenging where vertical health systems have dominated and where populations are ageing rapidly. Community based social innovations (CBSIs) are initiatives that seek to empower older people to improve self-efficacy in caring for themselves and their peers, with the aim of maintaining wellbeing through promoting social cohesion and inclusiveness as well as health, education and livelihoods related programs. Understanding the role of CBSIs and how they may link with health and other services to promote healthy ageing is crucial. We sought to examine evidence of effectiveness of CBSIs and to study current CBSIs to develop a typology to advance this understanding.

Methods

A systematic review of the evidence of effectiveness and cost-effectiveness of CBSIs in middle- and high- income countries (Prospero registration number 42016051622). In addition ten case studies, drawing on document review and key informant interviews (10-15 per case study) were conducted in middle income countries.

Results

44 papers were included. The CBSIs were diverse in nature of activities and outcomes reported. Most studies reported interventions having positive impacts on participants, such as reduced depression, though the majority were classified as being at medium or high risk of bias. There was no evidence on costs or cost-effectiveness and very little reporting of outcomes at an organisation or system level. The systematic review was used as the basis to develop our typology which was tested and refined through the case study analysis. We present the typology which classifies included CBSIs according to: (i) level of empowerment for older people; (ii) linkages with health and social care systems; (iii) scale, scope and complexity. Four ‘types’ of CBSIs are proposed on the basis of this differentiation and the relative advantages and challenges associated with each.

Discussion

Our study establishes the existing evidence base and uses this as a basis to understand a range of CBSIs in operation currently. The research suggests a number of potential benefits of CBSIs particularly in improving wellbeing, reducing isolation and developing person-centred care for older people but there is a need to improve understanding and measurement of impact on healthy ageing. The typology offers a starting point from which to develop conceptual understanding and, at an operational level, a means to map CBSIs and to understand challenges to evolving models of CBSIs particularly around scale up and sustainability.
Regeru Regeru, LVCT Health, Nairobi, Kenya
Poster Number: 448

“Do you trust that data?” – A mixed-methods study assessing the quality of data reported by Community Health Workers in Kenya and Malawi

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Background: High-quality data are essential to monitor and evaluate the performance, quality, coverage and equity of community health programmes. However, data quality within Community Health Information Systems is rarely assessed formally. The aim of this study was to determine the quality of data reported by Community Health Workers in Kenya and Malawi and identify factors that contribute positively or negatively to data quality. We also set out to explore use of community-level health data in decision-making and identify interventions to strengthen Community Health Information Systems.

Methods: This was a cross-sectional mixed-methods study. We conducted Data Quality Assessments in eight purposively selected communities in Kenya and Malawi in 2017. In each community, for selected indicators, we recorded the values reported by individual Community Health Volunteers (CHVs) in their data reporting tools between March-May 2016. We aggregated these to obtain monthly totals for each indicator. We then recorded the values reported for the same indicators by the CHVs' supervisor in monthly supervisor summary reports for the same reporting period. Data verification ratios were calculated by dividing the aggregated totals from the CHVs' tools by the values reported in the supervisor summary reports to measure the consistency in values. We also conducted 13 focus group discussions and 53 in-depth interviews with key actors in management of community-level health data in both countries. Data were coded and analysed with the support of Nvivo 11® to identify enablers and barriers to reporting high-quality data.

Results: We found large discrepancies between the values reported by CHVs and their supervisors, indicating poor data quality. Data verification ratios ranged from 0.00-8.67. In some communities, there was no reporting at all. Factors adversely affecting data quality included: unavailability of standard and thoughtfully-designed data reporting tools, lack of training and supportive supervision to regularly reinforce correct interpretation of health indicators, unreliable data management procedures and lack of feedback from primary healthcare facilities to CHVs. Respondents also reported unsystematic use of community-level health data for decision-making that is often not documented.

Conclusions: Our findings of poor data quality have widespread implications for the analysis and use of community-level health data by policy- and decision-makers, undermining the quality of community health programmes. The most urgent interventions recommended to strengthen Community Health Information Systems are: provision of adequate supplies of standard data reporting tools designed to suit CHVs; regular training, feedback and supportive supervision founded on locally-collected data; and regular Data Quality Assessments.
What motivates health workers engaged in a complex health system? Findings from a survey of community workers, facility-based providers and managers in Bihar, India

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Background: It is implicitly understood that more motivated individuals are likely to perform better. The same holds true for the health workforce, especially given that they often work under challenging circumstances. It has been the endeavour of most low and middle-income countries to design strategies to improve health worker motivation in order to enhance not only their performance but also of the health system as a whole. The purpose of this paper is to identify factors of motivation among different cadres of human resources for health, namely community workers, facility providers and health managers, in the government primary health system in Bihar, India.

Methods: This study attempted to understand factors of motivation among different employees of the government primary health system using a structured Likert scale, with 25 items, based on the Self-Determination theory of motivation postulated by Deci and Ryan (2005). This theory distinguishes between three types of motivation depending on the reasons behind an action: intrinsic motivation, extrinsic motivation and amotivation. A contextualized scale was designed for each type of employee, namely frontline health workers (n=1000), facility providers (n=540) and sub-district (block) level health managers (n=442). Exploratory and confirmatory factor analyses were used to identify domains of motivation for each type of respondent.

Results: Findings from exploratory and confirmatory factor analyses suggested four domains of motivation resulting from a reduced scale with 11 items for frontline workers, and five domains consisting of 15 and 16 items for facility-based providers and mid-level managers respectively. The frontline workers found higher motivation from extrinsic (financial) rewards as compared to non-financial extrinsic rewards and intrinsic factors. On the other hand, the main source of motivation for facility providers and block-level managers was more intrinsic in nature (enjoyment from work, contribution towards improving health of community). A stark difference in motivation scores between permanent and contractual staff was found, with latter less motivated due to financial incentives such as salary and job security.

Conclusion: The study implies that determinants of motivation vary across different employees of a government primary health system and hence incentive structures should be designed appropriately. In particular, findings suggest a need for restructuring incentive payments and monetary benefits for frontline workers as well as re-defining the career pathways of contractual staff. Finally, strengthening of financial management systems, particularly for improving timely disbursements of salary, are warranted to keep employees across all levels motivated to perform their tasks.
Experiencia de innovación tecnológica para reforzar la gobernanza de un sistema de salud territorial: proyecto SimudatSalud Risaralda, Colombia

Antecedentes
Risaralda es un Departamento de Colombia con 1 millón de habitantes. Es reconocido por su liderazgo en salud, no obstante, la existencia de falencias en sus capacidades institucionales para ejercer la rectoría del sistema de salud territorial y el cumplimiento de los ODS, ante lo cual decidió priorizar el fortalecimiento de sus capacidades de gobierno, mediante un proyecto de investigación e innovación, con financiación pública:

Mejoramiento de la gestión de riesgo en salud sobre las ENT. La gobernanza sobre los programas de salud pública. Regulación de los mercados de servicios de salud. Monitoreo de la calidad de los servicios de salud y la gestión corporativa de hospitales públicos

Objetivo
Fortalecer la gobernanza sobre el sistema de salud territorial, basada en innovaciones de base

Metodología
La Gobernación de Risaralda, con la cooperación del Centro de investigaciones en Salud - de la Fundación Salutia, desarrolló el proyecto entre 2016 y 2018. Se diseñó un laboratorio de simulación de la demografía, salud, finanzas y gestión del riesgo, probando el efecto de una política de impuestos a las bebidas azucaradas. También se desarrollaron dos sistemas de gestión, para optimizar el desempeño (i) del programa de enfermedades transmitidas por vectores (ETV) y (ii) de la gestión corporativa de los hospitales, como también dos observatorios (iii) acerca de precios y tarifas transadas y (iv) acerca de la calidad de los servicios de salud. Se diseñaron las innovaciones, se construyeron herramientas basadas en TIC, se realizaron publicaciones científicas y se hizo transferencia de conocimiento a los funcionarios y beneficiarios.

Resultados
Se puso en marcha en la autoridad sanitaria territorial, y mediante un proceso de transferencia un laboratorio de simulación en salud (SIMUDAT©), dos observatorios y dos sistemas de gestión. Durante 3 años se hizo una inmersión temática de los funcionarios e la entidad. El Gobernador del departamento reorientó las políticas públicas en salud, con base en los resultados de los estudios y las innovaciones.

Lecciones aprendidas
Las innovaciones requieren una curva de aprendizaje de mediano y largo plazo. Cuando las innovaciones son aplicadas, el involucramiento de los funcionarios es más profundo y sostenible. El involucramiento en el liderazgo del proyecto tanto del Gobernador como de la Secretaria de Salud, y otro niveles de alta responsabilidad fue clave para el éxito del proyecto. El abordaje de ODS requiere fortalecer la gobernanza del sistema de salud mediante CTI
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Poster Number: AB

DESAARROLLO DE RECURSOS HUMANOS EN SALUD: EVALUACIÓN DE DESEMPEÑO
PERÍODO 2015. TUCUMÁN-ARGENTINA

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En el marco de los Objetivos de Desarrollo Sostenible de las Naciones Unidas, la Agenda Regional al 2030 de OPS/OMS en materia de recursos humanos, propone que los equipos de salud alcanzarán niveles óptimos de desempeño y de productividad acorde con estándares establecidos, coherentes con el modelo de atención, los objetivos del sistema sanitario y las expectativas de la población. El desarrollo del recurso humano es fundamental para garantizar atención de calidad en salud, siendo la gestión del desempeño laboral una herramienta fundamental para potenciar a equipos multiprofesionales en salud, dotarlos de competencias profesionales y sociales complementarias. Objetivos: Conocer los resultados obtenidos del Proceso de Evaluación del Desempeño en Sistema de Salud (2015). Analizar competencias genéricas y específicas del capital humano. Identificar áreas críticas que influyan en el diseño e implementación de la herramienta de gestión del desempeño sanitario. Material y Métodos: Se llevó a cabo una investigación descriptiva, transversal incluyendo a la totalidad del recurso humano del Sistema de Salud de Tucumán durante el año 2015, en condiciones de ser evaluados (N=15330). El instrumento utilizado fue el formulario de evaluación de desempeño, mediante el cual se midieron competencias genéricas y específicas para cargos operativos y jerárquicos. Resultados: Se determinó que el 1%(133) del recurso humano presentó puntaje inferior a 60 (Desaprobado) y el 84% alcanzó entre 80-100, con puntaje medio de 86 IC95%(86.2-86.5). En competencias genéricas los valores menores se observan en “compromiso con el aprendizaje continuo” (8.5) y “desempeño en situaciones complejas” (8.6); los promedios más altos se muestran en “conocimiento técnico en función de la tarea”. En cuanto a competencias específicas se observa menores puntajes en “versatilidad/capacidad de gestión” (8.6). Se pudo establecer que tanto en competencias genéricas como específicas los promedios más altos corresponden al recurso humano que se desempeña en cargos jerárquicos (Test ‘t’ no pareado, p<0.0001), destacándose entre las competencias genéricas las diferencias en “compromiso con el aprendizaje continuo” y en las específicas “versatilidad” para cargos operativos (8.2) y “capacidad de gestión” en cargos jerárquicos (9.0). Discusión: El desempeño en general califica como “Muy Bueno” (84% obtuvo más de 80). La herramienta debe complementarse con: 1-Indicadores de productividad de los servicios, 2-Nivel de satisfacción de usuarios, 3-Indicadores de desempeño colectivos, incorporando metas por equipos a fin de obtener mediciones basadas en variables cada vez más objetivas. Es fundamental el desarrollo de Sistemas de Gestión digital de capital humano y fortalecer el trabajo en red.
Ruptura del monopolio médico en la atención al parto. Estudio sobre la percepción de calidad de mujeres atendidas por enfermeras obstetras en Chiapas, México

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Antecedentes: La norma oficial mexicana 007 actualizada en abril de 2016, modifica radicalmente la forma de llevar a cabo la atención materno-infantil. La nueva versión de la norma abre la posibilidad, cerrada por décadas, de que personal no médico pueda participar en la atención, específicamente en el parto de bajo riesgo. El personal explícitamente mencionado son las Licenciadas en Enfermería y Obstetricia (LEO), las parteras técnicas-profesionales (PTP) y las parteras tradicionales (PT) capacitadas. El cambio en la norma ha generado un movimiento importante por parte de diferentes actores sociales para garantizar que lo que la letra señala se cumpla en la cotidianidad de la prestación de servicios de atención materno-infantil. En 2017, Compañeros en Salud logró alcanzar un acuerdo con las autoridades municipales y de salud en el estado de Chiapas para operar una casa materna donde los partos son atendidos por pasantes LEO.

Métodos: Todas las mujeres que tuvieron un parto entre agosto de 2017 y diciembre de 2018 en la casa materna fueron entrevistadas para conocer la experiencia de ser atendidas por LEO y no por médicos gineco-obstetras. Se diseñó una lista de preguntas abiertas para guiar la entrevista con las 14 mujeres en muestra. Se abordaron específicamente las experiencias de partos anteriores y el actual para contrastar opiniones sobre trato adecuado, violencia obstétrica, calidad percibida, tiempos de espera y búsqueda de atención en un próximo embarazo.

Resultados: La experiencia de ser atendidas por LEO se manifiesta muy superior a las experiencias anteriores en varias dimensiones: a) el monitoreo metódico del embarazo por el personal de los centros primarios de salud y la referencia de la mujer en tiempo y forma a la casa materna; b) que en la casa materna los tiempos de la atención fueron determinados por los procesos fisiológicos de la mujer y que siempre hubo recursos disponibles; c) que las LEO ofrecieron permanentemente una atención personal y cortés, acompañamiento y consejería y utilizaron un lenguaje accesible y comprensible.

Conclusiones: Esta nueva etapa de la atención materno-infantil en México se rompe el monopolio de atención por parte de la profesión médica. Las primeras experiencias de atención al parto con personal no médico, parecen promisorias para que el país se alinee a las prácticas que países industrializados y otros países latinoamericanos han seguido históricamente. Los beneficios reportados por las usuarias son tanto clínicos, organizacionales y en relación al trato recibido por parte de las LEO.
Eficiencia técnica en la producción de servicios ambulatorios de salud y mortalidad materna en México, 2008-2015

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Antecedentes. La muerte materna es un fenómeno focalizado en la población con mayor desventaja social. Garantizar el acceso regular y oportuno a servicios de salud eficientes y de calidad contribuye a reducir el riesgo de muerte materna y la obtención de mejores resultados de salud materno-infantil. Específicamente, mayores niveles de eficiencia técnica (ET) se asocian a mejores resultados de salud. En México no existen estudios que aborden el vínculo entre la ET e la producción primaria de servicios de salud materna y la razón de mortalidad materna (MMR) en población sin seguridad social. En un contexto de universalización de la salud, brindamos evidencia original sobre el impacto de la ET en la MMR en México, sobre todo en contextos de mayor marginación social.

Material y métodos. Realizamos un estudio ecológico-longitudinal con información de las 243 jurisdicciones sanitarias de la Secretaría de Salud de México, para el período 2008-2015. Describimos las variables utilizadas y mapeamos la MMR con el fin de encontrar patrones territoriales. A través de un análisis envolvente de datos por ventanas se estimó y ajustó la ET en la cobertura de servicios adecuados de salud materna (que implica recibir cuatro o más consultas médicas durante el embarazo y atención médica e institucional del parto). Estimamos el impacto de la ET sobre la MMR de población sin seguridad social mediante un modelo de regresión panel en dos etapas de Heckman.

Resultados. Por cada punto porcentual de incremento en la ET, a nivel de las jurisdicciones sanitarias, se reduce 0.51 puntos porcentuales (p<0.01) la MMR. Este efecto fue heterogéneo de acuerdo al nivel de marginación social; -0.62 puntos porcentuales (p<0.01) en aquellas jurisdicciones sanitarias de alta marginación, y nulo en aquellas de baja o media marginación social.

Conclusiones. Contar con unidades de producción de servicios de salud técnicamente más eficientes podría contribuir a la reducción significativa de la muerte materna en México, sobre todo en aquellas comunidades de mayor vulnerabilidad social. Reducir efectiva y sostenidamente la muerte materna en México requerirá que las políticas públicas sean integrales, intersectoriales y busquen modificar las condiciones estructurales que generan vulnerabilidad en determinados grupos poblaciones.
Javier Arakaki, Universidad Nacional Arturo Jauretche
Poster Number: AE

Envejecimiento y desigualdades según diferentes contextos socio espaciales del territorio urbano, Buenos Aires, Argentina.

Co-authors: Javier Osvaldo Arakaki-Universidad Nacional Arturo Jauretche; Liliana Borsani-Universidad Nacional Arturo Jauretche; Daniela Alvarez-Universidad Nacional Arturo Jauretche

Introducción:
Los sistemas de salud no alcanzan a compensar las desigualdades sociales que determinan la vida de las personas. La distribución territorial de la vejez presenta un patrón espacial con mayor concentración de personas longevas en áreas de mayor desarrollo económico-habitacional y educativo.

Objetivos   Establish diferenciales geográficos de longevidad dentro del Área Metropolitana de Buenos Aires. Análizar relaciones entre envejecimiento -expectativa de vida- desarrollo regional

Metodología
Se calculó el Índice de Envejecimiento (IE) para cada uno de los 39 Núcleos Poblacionales que conforman el AMBA (las 15 Comunas de la CABA y los 24 Municipios del Gran Buenos Aires). Se comparó este índice con dos indicadores socioeconómicos de cada núcleo poblacional: Cantidad de Personas con Nivel Secundario Completo y más y Cantidad de Hogares con al menos una Necesidad Básica Insatisfecha (NBI).

Se tomaron como fuentes de información los datos públicos de INDEC/CEPAL - REDATAM - Censo 2010; Ministerio de Economía y Finanzas de la Nación (Anuario 2014); Encuesta Anual de Hogares CABA 2014.

Resultados
El hallazgo consistió en identificar un patrón de distribución territorial del Envejecimiento Poblacional en el AMBA. La zona centro y norte de la CABA y el norte del GBA (Municipios de Vicente López y San Isidro) presentan un altísimo IE (más de 100), mientras que desde ese núcleo concentrado, el IE descende concéntricamente hacia los Municipios del segundo cordón del GBA (IE=20). Entre las variables analizadas se encontró un alto nivel de correlación. Entre el IE y la Cantidad de Personas con Nivel Secundario Completo y más (Sign: 0.0001; P: 0.968); y entre el IE y el porcentaje de hogares con alguna NBI (Sign: 0.0001; P: -0.791).

Discusión
El envejecimiento se comporta de manera diferencial según las unidades socioespaciales que integran el área. La epidemiología del envejecimiento es una herramienta clave para la planificación de la salud colectiva. Se deduce la necesidad de considerar en los estudios gerontológicos y geográficos propuestas tangibles para favorecer el establecimiento de programas que equiparen desigualdades.
Inequidades En Salud Y Protección Social Del Suicidio En Adultos Mayores De 60 Años En Colombia: Un Asunto De Justicia Social

INTRODUCCIÓN: En casi todos los países se han identificado altas tasas de suicidio en las personas adultas mayores (tercera y cuarta edad), refiriendo como causas principales y factores de riesgo el deterioro en la salud física y mental, la soledad y el abandono. Sin embargo, el rol de la protección social y los servicios de salud en este fenómeno no ha sido evaluado en Colombia. Surge entonces la necesidad de explorar qué condiciones de inequidad en salud y protección social desde la perspectiva de los Determinantes Sociales están presentes para esta problemática.

OBJETIVO: Identificar las inequidades desde el sistema de salud y protección social de las personas adultas mayores que comenten suicidio en Colombia, teniendo en cuenta los Determinantes Sociales de la Salud.

METODOLOGÍA: Se llevó a cabo un estudio de métodos mixtos tomando como población la totalidad de los casos de suicidio en adultos mayores de 60 años en Colombia en el periodo 2009-2013. El estudio incluyó la triangulación de información desarrollada en tres fases:

Fase 1: Un estudio epidemiológico cuantitativo, descriptivo, retrospectivo, transversal de enfoque empírico analítico, para caracterizar epidemiológicamente los suicidios.

Fase 2: Un estudio de análisis de equidad, cuantitativo, retrospectivo, para medir las desigualdades en salud a través de los determinantes sociales presentes en la historia de vida en salud de los suicidas del periodo seleccionado.

Fase 3: Un estudio cualitativo de historias de vida a través de las entrevistas y testimonios de las personas cercanas a los suicidas de los casos del periodo seleccionado.

RESULTADOS: Hubo 1167 casos de suicidio en adultos mayores de 60 años, de los cuales el 88% fueron hombres. Las motivaciones principales en los hombres se debieron a enfermedades físicas de índole crónica, terminal y/o discapacitante, mientras que en las mujeres predominó la enfermedad mental. Se identificaron inequidades/desigualdades en el nivel educativo, zona de residencia (urbano/rural), ocupación y condiciones de protección social (régimen de afiliación, logro de pensión, calidad y acceso a servicios de salud).

CONCLUSIONES: Las condiciones de pobreza, abandono y desprotección social, así como la calidad y acceso de la atención sanitaria fueron agravantes de la situación de salud de los adultos mayores, y por lo tanto detonantes en la toma de decisión suicida. Se evidenció una importante influencia del sistema de salud y protección social en los casos de suicidio, así como la necesidad de fortalecer las capacidades de atención diferencial para este grupo poblacional.
Modelo de microsimulación dinámica para estimar la situación de salud a 2050 con base en factores de riesgo, desarrollado para la gobernación de Risaralda, Colombia

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Antecedentes: La planeación en salud se realiza mirando datos retrospectivos, usualmente fragmentados. Las enfermedades cardio-metabólicas son la primera causa de muerte en Risaralda y en Colombia. Mirar escenarios futuros sin y con intervención puede mejorar la toma de decisiones y aportar al cumplimiento de los ODS. La microsimulación dinámica permite integrar la información y generar dichos escenarios. Su construcción fue financiada por la gobernación de Risaralda.

Objetivo: Estimar la morbi-mortalidad cardio-metabólica para el periodo 2010-2050 y consolidar un modelo de microsimulación dinámica basado en factores de riesgo en una población colombiana que fortalezca la planeación y gobernanza del departamento de Risaralda.

Metodología: Uniendo fuentes de información oficiales consolidamos una sociedad artificial que reproduce hábitos y desenlaces en salud observados en Risaralda, Colombia. Definimos reglas para el comportamiento de factores de riesgo priorizados con base en literatura, datos observados y estimaciones propias. Usando modelos de sobrevida se estiman el riesgo de enfermar y los desenlaces de morbi-mortalidad para cada individuo de la sociedad. Desde el estado inicial, la sociedad evoluciona siguiendo las reglas del modelo de simulación. Se estiman indicadores de factores de riesgo y de desenlaces entre 2010 y 2050 a partir de micro-datos. Se analizan: consumo de frutas y verduras, actividad física, colesterol, sobrepeso y obesidad, tabaquismo, glicemia, tensión arterial sistólica y su efecto en la morbi-mortalidad de enfermedades cardio-metabólicas. El visualizador y el simulador se entrega a la Secretaría de Salud mediante un proceso de transferencia.

Resultados: Preliminarmente entre 2010 y 2050 la prevalencia de tabaco aumenta un 26%, sin las intervenciones del convenio marco para el control de tabaco. Los factores de riesgo incrementan su prevalencia, especialmente el exceso de peso un 70%, mientras que los protectores describen un comportamiento estático. Para el año 2050 se duplican las personas con diabetes y aumentan 40% aquellas con un evento isquémico coronario. Se espera que la Secretaría de Salud incorpore el simulador en la planeación anual al finalizar el proyecto.

Discusión y conclusiones: Con resultados preliminares identificamos que la prioridad para el departamento es la intervención de hábitos que llevan al exceso de peso y al tabaquismo. El modelo de microsimulación proporciona evidencia para el trabajo de incidencia política necesario para movilizar a otros sectores. Al finalizar el proyecto, se tendrán insumos para la planeación, incluyendo escenarios alternativos en tabaco y actividad física y sus consecuencias sobre las enfermedades cardio-metabólicas.
What Public health systems mean for India’s poorest 8 percent - A study from three states.

Co-authors: RIZU . Sama- Resource group for Women and Health

Background: Scheduled tribes comprise 8.6% of India’s population—104 million as per the 2011 Census, yet they disproportionately represent one of the most poorest and marginalized groups in the country. Despite a decline in one-third in their poverty rate between 1983 and 2011, these rates remain high because of their low starting point. Additionally, these communities experience multiple vulnerabilities including low levels of education, poor geographical access, poor health status and reduced access to healthcare services. Thus, it is important to juxtapose their health within a framework of social determinants of health and access.

Methods: The present study thus looked into understanding the status of public health care delivery system in tribal areas in 3 states in India, which focused on the status of public health care utilization among tribal communities and barriers faced by them in access to health care. It is primarily a qualitative study, which focused on patient experiences of the health system collected through in-depth interviews and in-depth interviews with service providers.

Findings: The data was collated and analyzed from a framework of Availability, Access, Affordability and appropriateness and social determinants of health. The findings pointed to the prevalence of a range of morbidities including communicable, non-communicable, injuries, reproductive and child morbidities, mental health issues etc and how the health system responded to the needs of this marginalized community. Individual experiences of seeking healthcare were extremely diverse and iterated that the health system is not a monolith, as in face of a poorly equipped, distrustful public system of health care, people visited local practitioners or healers to access different kinds of treatments and cures for their health conditions. There also exists an entrenched cultural gap and mistrust between the largely nontribal health providers and tribal residents.

Discussion: The research findings point to several layers of inadequacies in the public health care system but also in the general social services net for these communities. It is important to acknowledge that universal health coverage is an important measure of social protection as the poverty-malnutrition-illness triad continues to haunt this community which is worsened in face of a poorly equipped health system. It also points to how one of the most marginalized communities slip through the health system safety net and what are the chief measures that states can take to address health rights of their most marginalized citizens.
Influence of Socio-Political Capital under New Democratic Governance: A Study of National Rural Health Mission, Maharashtra, India

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Background

The New Public Governance (NPG) has come with an element of democratic and community participation. National Rural Health Mission (NRHM) in India framed a new participatory governance institutional structure for the public health system and made innovations in management included a monitoring and accountability framework as part of NPG processes. However, the NRHM governance model has not been explored adequately, including its role, functions, and structures at ground level. Hence, the present study focused on processes of decision-making within the NRHM, attempting to understand the health governance transition at the community level. It examines the structures and processes of decision-making as the critical element of health governance.

Methods

The study used qualitative research methods. It explored the process of decision-making in five stages, namely policy formulation, planning, operational guidance, implementation and monitoring of health services, was studied under the NRHM from the village level to state level. Study adapted a Health Systems Governance (HSG) framework of Siddiqi et al. (2009). It used purposive and snowball sampling to select respondents according to five actors in governance, i.e., the public administrators, political leaders, policy planners, civil society and community members. This study located on two sides of Pune district of Maharashtra, one with the implementation of “Community based Monitoring and Planning” and one without this element.

Discussion/Conclusions

The study observes that there have been significant changes in health governance that emphasized on strengthening management, decentralization of decision making and community participation under the NRHM. The study found that governance transition with new structures and value framework developed under the NRHM. It has strengthened the management structures of generalist administrators with the symbolic inclusion of marginalized sections, and thereby shaped health governance as “soft authoritarianism with a democratic face.” Its experience highlights the limitations of New Public Governance. The social-political capital ethos and a bureaucratic system dominated by new governance structures. New participatory structures did not bring any attention to a major issue faced by people in their interactions with the health system.
Analysing disrupted reproductive health systems: A case study of Sudan

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Background: Reproductive, maternal and child health (RMCH) indicators in Sudan are among the worst in the region. Decades of internal conflicts, geopolitical instability, and economic sanctions have contributed towards a weakening of the health system. In addition, the secession of the South resulted in a loss of 75% of the country’s oil revenue creating a 30% gap in the national budget, and a 9.8% health expenditure resulted in false inflation and catastrophic out-of-pocket expenditure. In the year 2013, a universal health coverage (UHC) expansion programme was adopted to achieve Health for All in the SDG era. Among other things, this programme sought to train an additional 14,000 community midwives. The current study sought to identify the major barriers and facilitators to achieving RMCH-related SDG targets in Sudan.

Methods: The current case study employed a desk review of national documents, reproductive health policies, strategies and laws published over the course of the last decade. The desk review was complemented with key informant interviews from policy makers, Director Generals of RMCH, PHC, HRDD and Nursing and Midwifery from Federal and State Ministries of Health, RMCH training bodies and instructors, professional unions, OBGYN specialists and HRH and RH national experts. Furthermore, RMCH stakeholder analysis was conducted.

Results: The reproductive health system in Sudan suffers from severe fragmentation. The main providers of reproductive health care in Sudan include the Ministry of Health (through the public system) and the Ministry of Social Welfare (through the National Health insurance Fund). However, RMCH is also provided by the military, the police corps, and INGOs, in addition to the informal health systems (i.e. traditional healers), with a greater use of traditional birth attendants in conflict-affected states. Despite the deployment of additional community midwives, the shortage of health workers, skill-mix imbalances, geographical misdistribution, scarcity of resources, contradicting health policies, and poor working environments negatively influencing health worker retention and outward migration are still among the challenges facing the RMCH workforce.

Discussion/conclusions: Despite the progress in numbers of reproductive health cadres produced as part of the UHC expansion programme, the availability, accessibility, acceptability and quality of care provided by RMCH workers still varies. Health labour market imbalances characterised by weak deployment policies, States ministries of health’s inability to absorb cadres despite the need, dual practices, and weak performance management system further present challenges to achieving UHC.
Improving Access and quality of Maternal Health Services in Rural Ghana through the use of Social Accountability: The case of the MEHAP Project

Community Health Committees (CHCs) in three districts of the Upper East Region of Ghana were trained on policy and implementation arrangements of health facilities (CHPS, Clinics, Health centers, patients charter, referral policy, code of ethics and conduct of Ghana Health Service (GHS) after which CHCs identified weakness in the health delivery system in their communities and generated a monitoring criteria for Eleven barriers identified, namely, 24hr availability of general services, 24hr availability of referral services, Attitude of staff, Managing Client complains, Feedback on client complains, 24 hour availability of delivery services, 24hr availability of routine MCH drugs and antigens, 24hr availability of routine MCH drugs and antigens, Health Infrastructure for Service delivery, Health Infrastructure –accommodation, Home visits/outreach, Sale of non-medical consumables e.g. soap Dettol, pad. A scale of one (1) to Five(5) was used to assess performance of health facilities by CHC using the Community Score Cards (CSCs)(1-Very bad, 2-Bad, 3-Average, 4-Good, 5-Very good). Based on the scores using the Community Score Cards (CSCS) a community Health Action Plan was developed jointly by each CHC and their respective local health authorities. Primary data from CSCs of 33 CHCs in the Builsa North (14), Binduri (11) and Pusiga (8) were analyzed with the first CSCs conducted in August 2014 compared to the final CSCs conducted in April 2017. The Results indicated CHCs were extremely successful in lobbying local authorities, other NGOs for health infrastructure mainly accommodation, expansion of health facilities and even the construction of feeder roads. The results also indicated there was an average improvement of scores by 0.95 in the Builsa North District with the biggest gain being 24 hour availability of delivery services (1.78). The Pusiga District recorded an average progress of 0.5. Infrastructure for service delivery and accommodation also recorded massive improvements of 1.5. In the Binduri District, 24 hour availability of delivery recorded the biggest improvement of two (2) which is a clear indication that more people in the District are getting access to delivery services in their localities. Management of client complains and feedback also improved but this remains informal as there are no records at the facilities. However 24 hour availability of routine MCH drugs and antigens recorded negative values across all areas and this was largely due to stock outs of routine drugs and antigens. We recommended that community health systems should be strengthened to ensure access to health services by vulnerable groups and communities.
Trust is the engine of change: A conceptual model for trust building in health systems.

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Purpose: Existing health systems frameworks examine trust, but they do not explore underlying mechanisms that build or sustain it. We propose a model to understand and measure trust building.

Focus/content: Supporting sustainable positive change and advancing gains in maternal and child health is at the center of the sustainable development goals (SDGs). The relational nature of the health system and people’s trust in it contribute to one’s access to care and adherence to recommendations. Researchers have become increasingly interested in how trust is built in the health system, but existing frameworks encompassing qualitative measures, social networks and social accountability do not explore underlying mechanisms that build or sustain it. We examine trust at the theory level as an engine driving sustainable change, using a measurable dimension of the trust construct: reciprocity. Reciprocity enables stakeholders in health systems to “try out” their interactions with less risk to calibrate their level of effort, time, and emotional investment before continuing further. Reciprocity includes three measurable elements: norms furthering equitable and healthier communities, mutual self-interests and gratitude/indebtedness.

In health systems, reciprocity enables less powerful actors to define and act upon what they contribute to it, not just what they receive, and it enables community health workers, households and health facilities to calibrate relationships for pursuit of self-interests. Understanding the cycle of reciprocity in human relationships and its iterative partner in Plan-Do Study-Act cycles opens a way to measure trust that improves on previous work in human centred design social accountability, and traditional monitoring and evaluation frameworks.

Significance for the sub-theme area: A better model of trust building in health systems is needed. This is important for building people’s trust in it, in order to improve access to care and changing health behaviors. It is also important for understanding how to make positive change at multiple levels in the health system, from the policy/federal levels to the community level.

Field-building dimension of relevance: Conceptual research in health systems; trust; social capital.

Target audience: Health system researchers, emergency (disaster) responders, and prevention and development organizations who need simpler and more immediate or short-term measures to assess the impact of their interventions and potential for sustainability.
Role of Community Health Volunteers in Mombasa health sector performance

Ahmed Masoud Adam, county government of Mombasa
Abstract Id: 3325

Introduction
Community health volunteers (CHVs) provide health education and services to families who may not otherwise have access to health care. CHVs have been vital in creating demand for family planning programs at the community level, as well as linking women and families to the health system. CHVs go door-to-door, discussing the health benefits of family planning, and counseling women and their partners to find a contraceptive method of their choice. The CHVs recognize the importance of family planning for the health of women and children, and the economic and social challenges their neighbors face in their day-to-day lives. They have worked together with health care workers in ensuring that key populations are well sensitized on ways of minimizing spread and avoid stigma of accessing care. The relevance and impact of CHV contribution has not been identified and there is lack of studies. We aim to close this gap and provide evidence on it.

Objectives:
To generate evidence on importance of community health volunteers in different health programs and to describe how health targets and program indicators of success can be achieved if more community health units are formed.

Methods:
We reviewed and analyzed data available in DHIS for the following indicators: mortality rate, under 5 mortality rate, infant mortality rate, immunization against major illnesses, HIV prevalence, fresh still births and macerated still births in Mombasa County annually for the period of 2014 and 2018.

Results:
We find that following implementation of the new community health units, most of the health indicators improved and after increase in number of community health units we would wish to achieve a decrease in mortality rate. A decrease in the under 5 mortality rate that is attributable to pneumonia and diarrhea. Ensure there is a decrease in new born mortality rate. There is full immunization against major illness. Maternal mortality is decreased. Prevalence of HIV has reduced while keeping track of the key populations and the adolescent. The family planning in communities has increased. There is increased life expectancy for the people of Mombasa.

Conclusions:
The family planning in communities has increased. Health units can provide care to people that would otherwise be left without any access to healthcare services. Even though more studies are needed to estimate the long-term impact of health unites implementation, there is evidence that suggests that it could potentially increase life expectancy for the population of Mombasa.
Oluwatosin Adekeye, COUNTDOWN/Sightsavers  
Abstract Id: 3086

Innovative use of community structures to promote community ownership, accountability, and governance of health service delivery: A case study from Nigeria

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Background

Community participation and the importance of bringing health services close to where people live is emphasised in the Alma Ata declaration. For decades, in rural Nigeria, Neglected Tropical Disease (NTD) programmes have implemented community directed interventions for drug distribution that rely on community participation and ownership. However, over time demographic shifts and social change have resulted in stagnation regarding community participation processes. Understanding how community directed approaches can respond to societal, political, demographic and environment changes is crucial to identify new ways of working across disease programmes and new mechanisms to promote community participation in health interventions. This abstract explains how the use of participatory methods can allow health system actors to understand why previous successes occurred, what social and demographic factors have become disruptive and how to develop novel approaches for community engagement.

Methods

Participatory methods were used to examine community engagement potentials for the NTD programme across rural, urban, border and migrant contexts in Nigeria. Methods included transect walks and social mapping with community members to identify which community structures are used by women and men of different ages, religions and ethnic groups. Stakeholder workshops and interviews also captured how community structures, institutions and social spaces are currently being engaged with for NTD community mobilisation and potentials for the future. Stakeholders debated how engaging with additional community structures could empower communities to take ownership of community based health initiatives.

Results

Historically, homogenous community structures supported high levels of community mobilisation, particularly through engagement of community leaders. However, with increasing levels of urbanisation and cultural diversity, such structures are less dominant or absent, and health systems actors suggested that alternative methods of engagement needed to be identified. Using participatory tools to identify solutions allowed communities to reflect on the possible use of structures such as places of worship, football viewing centers, water distribution points, central points (junctions & community leader’s house), chemists and workplaces to improve equitable access to health initiatives.

Discussion/Conclusion

Identifying how community structures facilitate or demotivate communities to participate in health initiatives and how they could be accessed to achieve shared models of accountability, governance and service delivery is true to the Alma-Ata values and has potential to contribute towards universal health coverage. Emergent and varying contexts frequently mean that one size does not fit all and community opinions and needs should be prioritised in engagement strategies.
Progress and relationship between vaccine coverage and under-5 mortality in sub-Saharan Africa: analysis of Global Burden of Diseases Study 2016

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Background: Sustainable Development Goal (SDG) 3.8 targets achieving universal health coverage by access to quality essential health-care services, essential medicines and vaccines for all. Adequate vaccine coverage is critical in protecting children and reducing risks of morbidity and mortality from vaccine-preventable diseases. It is essential to measure the progress made by sub-Saharan African countries towards the health-related SDGs especially vaccine coverage and reduction in under-5 mortality. This study examined the trend in vaccine coverage of the eight basic vaccines as included in national vaccine schedules in sub-Saharan Africa. The study also examined the relationship between under-5 mortality and vaccine coverage.

Methods: Data for this study was obtained from the Institute for Health Metrics and Evaluation, Global Burden of Diseases and Health-related SDGs data visualization tool. Indicator 3.b.1: Coverage of eight vaccines in national vaccine schedules data was obtained for years 1990 and 2016. The 2016 data for the indicator 3.2.1: Under-5 mortality rate (probability of dying before the age of 5 years per 1,000 live births) was also included.

Results: A total of 49 sub-Saharan African countries were included in this study. In 2016, the vaccine coverage ranged from 31% in Somalia to 99.8% in Seychelles. Only 15 countries surpassed the 90% vaccine coverage threshold. Paired t test analysis shows that between 1990 and 2016, the vaccine coverage among the countries progressed from 56.5% (95% CI: 49.8 – 63.2) to 81.4% (95% CI: 76.9 – 85.9) (p < 0.0001). Under-5 mortality ranged from 11.9 per 1000 live births in Seychelles to 130.5 per 1000 live births in Central African Republic. A linear regression established that uptake of the basic eight vaccines could statistically significantly predict under-5 mortality, F(1, 47) = 18.34, p < 0.0001. Vaccine coverage accounted for 26.5% of the explained variability for under-5 mortality.

Conclusions: There has been a significant progress made in sub-Saharan Africa in terms of vaccine coverage of basic vaccines for children. However, many countries and sub-Saharan Africa in general performed below the required threshold for vaccine coverage. This study shows that vaccination played a big role in preventing mortality due to vaccine-preventable diseases in Africa. There is need to sustain the support given by Global Alliance for Vaccines and Immunisation in order to meet up with various national targets for vaccination programmes in many African countries. African government also need to prioritise and provide adequate funding for vaccination.
HEALTH INEQUALITY ASSESSMENT: REPRODUCTIVE, MATERNAL, NEWBORN AND CHILD HEALTH IN UGANDA

Background: Health inequalities continue to persist around the world in general, and particularly in low- and middle-income countries. Inequalities are evident in the imbalanced way that health services are accessed by people of different socio-economic status, gender and ethnic groups, among others. They also manifest in variations in health outcomes according to education level, and in the tendency for health systems to better meet the needs of populations in certain geographical areas[1]. With the current global prioritization on universal health coverage, it is important to confront health inequalities and the underlying social, political and other determinants of health. Identifying where inequalities exist and monitoring how they change over time is essential to creating an equity-oriented health sector and provides a basis for incorporating equity into evidence-based health planning.

Objective: To assess levels and trends of inequalities in accessing reproductive, maternal, newborn and child health interventions in Uganda.

Methods: Two most recently available datasets from the Uganda Demographic and Health surveys (2006, 2011) were analyzed focusing on six coverage indicators and two equity stratifiers: wealth and region. Inequalities were assessed with two summary indices for absolute inequality and two for relative inequality.

Results: By economic status, the least equitable interventions were coverage of Skilled Birth Attendant (SBA) and modern contraceptive use. In terms of absolute inequality, SBA is the least equitable (diff: 44.7 vs 26.4; SII: 48% vs 31%), but in terms of relative inequality, modern contraceptive use is the least equitable (ratio: 3.1 vs 2; CIX: 19% vs 13%). The most equitable coverage indicator was DPT vaccine. By region, attendance of four or more antenatal care visits was highest in Kampala, followed by Karamoja, and the eastern region had the lowest coverage in both years.

Discussion/Conclusion: Despite increased coverage over time, the inequalities in health have remained largely unchanged over time. The most inequitable interventions should receive attention to ensure that all social groups are reached. Health inequality monitoring should be given more emphasis as an important part of overall health sector planning; ensure that data get used for effective action including political decisions.

[1] WHO 2013 Handbook on health inequality monitoring: with a special focus on low- and middle-income countries
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Abstract Id: 168

Will it be possible to attain Sustainable Development Goal 3 in the era of increasing disasters? An evidence-based study of Hindukush earthquake 2015 in Pakistan

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Background: Over the last two decades, earthquakes across different parts of the world have taken millions of human lives and caused countless injuries. Since 2005, in Pakistan alone, more than 0.1 million people lost their lives, and millions of others suffered physical and psychological injuries due to natural disasters; however, limited information is available on how these natural disasters, such as earthquakes, impact healthcare institutions and communities and how this is reflected in global health indicators. Objective: We aim to assess how earthquakes affect communities’ public health and healthcare service providers’ institution by using select global health indicators. Methods: We used a retrospective cohort study designed by retrieving ten districts’ monthly data regarding parts of the population that attended public health facilities for primary healthcare services, which include antenatal care, immunisation, vector-borne diseases (malaria), waterborne diseases (diarrhoea or dysentery), and airborne diseases (tuberculosis). For our study, the ten districts were organised into two main groups, each group including five districts each, with the determining criteria being the most affected and least affected by the earthquake regarding injuries, deaths, and collapsed structures. Monthly data over six years, from January 2011 to November 2016, was retrieved from the District Health Information System (DHIS) database, which has a reporting compliance of 100% for the study sites. Using specific indicators, we employ a time-series, retrospective analysis to assess earthquake-induced public health risks and vulnerabilities. Results: We determine, uniquely, that the geographic area most affected by the earthquake in 2015 is the area with the highest tuberculosis (TB) prevalence rate. Further, the number of confirmed cases and even deaths from malaria remain extremely low after the earthquake incident; however, at the same time, the suspected malaria incidence rate is significantly higher. From the data collected in both regions, pneumonia appears to have slight cyclical variations in its incidence rate depending on the season. Conclusions: By analysing selected health indicators before and after the earthquake, it is clear that earthquakes impact public health and cause various vulnerabilities. Some indicators are significantly affected by the earthquake while others are not considerably affected at all. Although it is likely not possible to do a real-time analysis in the time of an earthquake, we conclude that a retrospective analysis can somewhat mitigate the adverse impact of an earthquake on a community’s public health and the institutions that provide health services to communities by using global health indicators.
Knownledge translation in Africa for 21st century integrative biology: the "know-do gap" in family planning with contraceptive use among Somali women.

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An emerging dimension of 21(st) century integrative biology is knowledge translation in global health. The maternal mortality rate in Somalia is amongst the highest in the world. We set out to study the "know-do" gap in family planning measures in Somalia, with a view to inform future interventions for knowledge integration between theory and practice. We interviewed 360 Somali females of reproductive age and compared university-educated females to women with less or no education, using structured interviews, with a validated questionnaire. The mean age of marriage was 18 years, with 4.5 pregnancies per marriage. The mean for the desired family size was 9.3 and 10.5 children for the university-educated group and the less-educated group, respectively. Importantly, nearly 90% of the university-educated group knew about family planning, compared to 45.6% of the less-educated group. All of the less-educated group indicated that they would never use contraceptives, as compared to 43.5% of the university-educated group. Prevalence of contraceptive use among ever-married women was 4.5%. In the less-educated group, 80.6% indicated that they would not recommend contraceptives to other women as compared to 66.0% of the university-educated group. There is a huge gap between knowledge and practice regarding family planning in Somalia. The attendant reasons for this gap, such as level of education, expressed personal religious beliefs and others, are examined here. For primary health care to gain traction in Africa, we need to address the existing "know-do" gaps that are endemic and adversely impacting on global health. This is the first independent research study examining the knowledge gaps for family planning in Somalia in the last 20 years, with a view to understanding knowledge integration in a global world. The results shall guide policy makers, donors, and implementers to develop a sound family planning policy and program to improve maternal and child health in 21(st) century primary healthcare.
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Abstract Id: 2638

The Effect of a Quality Improvement Intervention on Equity in Maternal and Newborn Care Practices in Eastern Uganda: A Quasi-Experimental Study

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Background: Globally, there are many interventions targeted at achievement of Sustainable Development Goal number 3. However, inequalities in the health of the mothers and children from low and middle-income still exist.

Methods: We examined the inequalities in maternal health status, access and utilisation using twelve indicators of complex measurements of inequalities; Slope of index of inequality, relative index of inequality, concentration curves and indices. We also examined the spatial distribution of six selected maternal health indicators and the associations between socioeconomic status and other factors on maternal health access using generalized linear models of binomial family and logit canonical link function.

Results: Eighty eight percent attended antenatal care services during their last pregnancy. 85% made preparations for delivery, 48% birth were attended to by a skilled birth attendant, 46% had an institutional delivery. We found a significant difference for attendance of antenatal care for at least four times for combined data (RII=0.50, SII=0.25 and C=0.18) from both districts and (RII=0.43, SII=0.30 and C=0.20) from the intervention arm only. Significant inequalities were observed for HIV testing (SII=0.43, C=0.14), attendance of a delivery by a skilled birth attendant (SII=0.69, C=0.21), Institutional delivery (SII=0.68, C=0.21) and utilisation of any artificial and modern contraception methods for family planning (SII=0.36, C=0.17). The odds of residents of Mayuge to have a skilled birth attendant during delivery were 68% higher than those of women who were residents of Namayingo. The wealthiest women were twice more likely to deliver in a health facility compared to the women in the poorest SES quintile. Increase in education is significantly associated with a having an institutional delivery when compared to non-educated women; Primary education (OR 1.64, 95% CI (1.17–1.83)); Tertiary education (OR 3.53, 95% CI (1.53 – 8.11)).

Conclusions: District-wide interventions target improving access and utilisation of maternal health services. However, there is a discrepancy in reception of these interventions with the poor being least favoured. Our results provide the initial evidence of existence of inequalities to health access and utilisation in the district-wide quality improvement interventions.
Capacity Building of Frontline Line Health Workers using ICT enabled blended learning Modules on WHO/UNICEF 7 Point Strategy – Effectiveness and Perspectives

Background:
Diarrhoea is one of the leading causes of under-five mortality globally including India. WHO and UNICEF in a joint statement recommended a comprehensive 7 point “prevention, control and treat strategy” to tackle childhood diarrhoea. Under Save the Children “Stop Diarrhoea Initiative” in India, Ali and co-workers’ study found that frontline health workers need comprehensive training on diarrhoea which is participatory in nature, available in local language and near to workplace. They also identified that curriculum should be specific to cadre’s needs and large scale training programmes should maintain uniformity and standardization at process level but these factors are often neglected in traditional capacity building programmes of frontline workers. To address these issues, Information and Communication Technology (ICT) enabled, offline, blended learning course on comprehensive diarrhoea control covering all the aspects of 7 point strategy divided into 15 modules of 20-25 minutes each for frontline health workers. These modules can be downloaded into variety of devices including, smart phones, tablets, laptops and desktops and have case studies and quiz based interactive features along with animation and voice over for effective learning. We conducted this study to learn the effectiveness of the method and perspectives of trainees and trainers.

Methods:
The course was used to train 1705 workers and online data was collected from April 2017 to November 2017 using pretest and posttest survey with 20 % randomly selected participants. A survey with 100 randomly selected participants was also conducted after 6 months of training to check knowledge retention. In-depth interviews with 18 trainers and 24 trainees was also conducted.

Results and discussion:
The analysis shows that participants who scored 60% and above in the pretest increased from the level of 28 % in pretest to 72% in posttest. The retention survey shows 100 % scored more than 60%. The course participants felt that this is a modern learning system and high quality animation made the topics interesting, easy to understand and helped improving the retention. The modules are easily accessible on their devices and they can quickly refer the material. The trainers shared that the system is innovative, training content is simplified and well organized, gives more opportunity to discuss topics, easier for them to cover topics which are culturally sensitive like breastfeeding and ensures effective learning by using interactive features.

Conclusions.
ICT based blended learning has potential for large scale high impact frontline workers’ training in community health programming.
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**Barriers to Enrolling Into the Subsidized Healthcare Regime: Experiences of Marginalized Populations with HIV in the Dominican Republic**

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**Background**

Since 2001, the Dominican Republic has been implementing a mixed public-private social insurance scheme, Family Health Insurance (FHI), with a subsidized plan to ensure access to quality healthcare, including HIV services, to low-income families. By 2017, only 57% of the population living with HIV was enrolled in FHI, subjecting patients to out-of-pocket costs for some HIV and co-infection services, and limiting facilities’ ability to be reimbursed for HIV care. Prior findings suggest that key and priority HIV populations, including Haitian migrants, men who have sex with men, transsexual individuals, and sex workers, are less likely to be enrolled in the FHS.

**Methods**

The USAID-funded Health Finance and Governance Project (HFG) conducted a qualitative study to assess the barriers to FHI enrollment for key and priority populations. HFG partnered with community organizations to recruit study participants. The study included 10 focus groups of 4 to 8 participants with questions assessing knowledge of the FHI, eligibility, the enrollment process, and benefits. HFG analyzed the data to identify barriers to enrollment and other common themes among participants’ experiences with the healthcare system.

**Results and Discussion**

The most common barriers identified were 1) lack of information about the FHI, 2) lack of identification documentation, 3) lack of flexibility in the enrollment process and bureaucracy, and 4) fear of discrimination. The focus groups revealed that marginalized groups disproportionately lack identification and resources to initiate and follow-up on their enrollment in the subsidized plan, or are misinformed about the benefits of enrollment. Lack of identity documents, for both Dominicans and migrants, is a major barrier. National data suggests 80 percent of unenrolled people with HIV lack proper identity documents. Enrollment in FHI is vital to guarantee an individual’s access to health services and ensure the sustainability of the Dominican HIV response. HFG is currently working with the Dominican government to facilitate regular communication between primary care sites and the organizations responsible for verifying eligibility and enrollment of patients in the subsidized plan. HFG also seeks to partner with community organizations to facilitate access to identity documents and verify enrollment among key and priority populations. Key and priority populations, including migrants and undocumented Dominicans, may need to be given flexibility to enroll in the subsidized plan for the Dominican Republic to achieve universal coverage for people with HIV, guarantee access to services, achieve the UNAIDS 90-90-90 targets, and completely implement the 2001 healthcare reforms.
Leveraging health systems strengthening through higher education: Understanding practice and politics of initiating and sustaining postgraduate programs in public health training institutions in sub-Saharan countries

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Background
Public health training institutions are mandated to train the next generation of health professionals, and are considered as strategic allies or entry points to leverage health system strengthening. In-country postgraduate training program in low and middle income countries (LMICs) are widely considered to reduce cost, improve access, enhance curriculum relevance, curb brain drain, and ensure sustainability. The paper interrogates the process through which training programs are introduced and sustained in three public health training institutions based in public universities in three sub-Saharan countries (Mozambique, Rwanda, Ethiopia). This is hoped to contribute to body of knowledge on implementation of initiatives to strengthen capacity of public health training institutions towards health system strengthening.

Methods
The paper moves away from a results based perspective, and adopts a systems thinking and complexity lens. It seeks to contextualize process and outcomes of initiatives to introduce and integrate postgraduate programs in public health training institutions by locating them in the web of processes and relationships among actors across different levels. To this end, a qualitative multiple case study design was used to tackle ‘why’ and ‘how’ questions about the introduction of new programs. Data were collected through interviews, observation and document review. Semi-structured interviews were held with 36 key informants located in the public health training institutions, health ministries, and external development or training partners. Data were then triangulated and analyzed thematically.

Results
A cluster of structural, institutional and individual factors were found to mediate process and outcomes of introducing and sustaining new training programs. The study showed that postgraduate programs get introduced in public health training institutions either through the initiation of the training institution or government (MOH/ MOE). These processes often originate or are supported by external development/training partners, and programs assume either regular (structured) or special (flexible) modalities. Programs may focus either on the internal capacity of the training institution (supporting institution and faculty, promoting diversity of training programs) or external capacity (being responsive to the country’s health workforce need).

Conclusions
The process of introducing and integrating postgraduate programs in Public Health training institutions is as much a political process as it is a technical one. The process is a complex and contested undertaking subject to influence by multiple actors with different vested interests. The success of the process heavily relies on the nature of partnership, coherence among the interests of multiple partners; and attributes of program champions (power, reputation, motivation).
Improving Implementation Fidelity to Tuberculosis Care Cascade Using Quality Improvement Method in North West Province, South Africa

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Introduction: Tuberculosis (TB) is the leading cause of HIV-associated mortality in Africa with the risk of developing active TB is estimated to be 26 times higher in PLHIV. Data from South Africa showed that Tuberculosis treatment was not begun in nearly half of PLHIV who did receive a diagnosis of TB. Furthermore, Isoniazid Preventive Therapy(IPT) uptake even where available was low, only 18% of asymptomatic patients received IPT. Whilst only 10% of participants in study Uganda who were asymptomatic at baseline received IPT. This is similar to data from Ghana that showed that 44% of People Living with HIV (PLHIV) in are not screened for TB, missing opportunities to detect cases. Hence the need to identify and implement appropriate quality improvement(QI) to address the bottlenecks.

Objectives:
To determine level of fidelity (coverage of TB screening among PLHIV, diagnostic testing, treatment and provision of IPT) to TB care cascade(TCC) in North West Province(NWP), South Africa.
To explore barriers and facilitators of implementation fidelity to TCC in NWP, South Africa.
To design and test QI strategies to improve implementation fidelity to TCC in NWP, South Africa.

Method:
Pre-intervention phase
An initial baseline study will be conducted to analyze coverage and fidelity of the TCC in North West Province, South using data from patient files and interviewing PLHIV, Healthcare providers, TB program managers, PLHIV. The National Implementation Research Network’s (NIRN) framework will be used to develop interview guide to identify barriers and enablers- organizational, competency and leadership drivers that influence implementation fidelity to the TCC. A context specific QI strategy will be designed and operationalized using intervention mapping(IM) strategy through a consultative meeting with stakeholders guided by the NIRN model.

Post-intervention phase
Analyze changes in fidelity to the TCC supported by the quality improvement strategy using run charts.

Discussion: The study will report on the level of fidelity in percentages and identify the bottlenecks from the National Institute Research Network(NIRN) model. Thus Competency-are mechanisms to develop, improve and sustain stakeholders ability to implement of TCC. Organization- mechanisms to create and sustain hospitable organizational environments for effective TCC and Leadership- leadership challenges that often emerge as part of the change management process needed to make decisions, provide guidance, and support TCC.

Conclusion: This study will demonstrate the feasibility of measuring implementation fidelity to TCC, reveal factors that influence its implementation and strategies to improve fidelity in NWP, South Africa.
Implementation of Facility-based intervention to promote experience of respectful and quality maternity care of women during childbirth: Lessons from Nigeria experience

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Background: Despite the increased access to services of skilled birth attendants, research evidence has proved that poor quality of facility-based care for pregnant women and newborn remains a major cause of increased rate of maternal and infant morbidity and mortality in low and middle-income countries (LMICs). Among the key contributory factors to the high maternal and infant mortality in LMICs is the lack of adherence to respectful maternity care among providers. This study was designed to achieve two objectives: (i). to assess the factors contributing to disrespectful care and (ii). the effect of training skilled birth attendants on the standards of respectful maternity care (RMC) as a strategy to improve access to quality care, women satisfaction and mortality reduction.

Methods: A quasi-experimental study conducted in 4 health facilities (2 intervention and 2 control sites) selected through multi-stage sampling. Data collection from both sites were through mixed method (86 questionnaires, 6 focus group discussions, 20 client exit interviews and 10 in-depth interviews from providers, managers and postpartum mothers. A before - after design was used in assessing effectiveness of the training conducted at the 2 intervention sites.

Result: Most of the postpartum mothers are from a low socioeconomic class and are living minimum of 7 kilometres away from the health facility. Up to 60% described one to three of the categories of disrespectful care (non-dignified care, no informed consent, physical abuse, lack of choice/preferences, lack of confidentiality/privacy, abandonment, discrimination/inequity and detention) which they experienced during childbirth. The mothers expressed their unwillingness to have their next childbirth in those facilities. The providers revealed that lack of supportive supervision, inadequate social accountability, weak infrastructure, lack of equipment and materials and inadequate staff, create room for disrespectful, abusive and inequitable care. The managers noted that the lack of political will, budget cuts and economic austerity among clients are hampering the creation of a supportive environment for provision of quality care Pre-intervention mean score from intervention vs control sites showed knowledge (2.76 vs 2.75), attitude (2.60 vs 2.61), practice (1.95 vs 1.87) and client satisfaction (1.30 vs 1.38). Post intervention mean score from intervention and control sites showed knowledge (4.50 vs 2.74), attitude (4.24 vs 2.60), practice (3.90 vs 1.90) and client satisfaction (2.95 vs 1.38).

Discussions / Conclusions: Capacity building in RMC for providers and managers and a supportive environment contribute to ending preventable maternal and infant deaths in LMICs.
Rural South African community perceptions of antibiotic access and use: a qualitative study

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Background: The knowledge and practices of rural South African populations with regard to antibiotic access and use remain understudied. Our aim was to explore community members' experiences of antibiotics to inform patient-level social interventions for appropriate antibiotic use.

Method: Embedded in the INDEPTH-ABACUS (AntiBiotic ACcess and Use) project, this qualitative sub-study employs interviews and focus group discussions. We used Levesque’s Access Framework’s five abilities needed to access healthcare. A sample of 60 community members was recruited from the Agincourt Health and Demographic Surveillance System, in Mpumalanga, north east South Africa (April-August, 2017).

Results: Community members reported taking antibiotics prescribed from legal sources: by nurses at the government primary healthcare clinics or private doctors dispensed by private pharmacists. There was no reference to illegal sales of antibiotics to the community, though shaman market stall sellers may need regulation. In some cases, people reportedly finished their courses according to the instructions, or kept drugs for future episodes of infection. People were not familiar with the words ‘antibiotic’ or ‘antibiotic resistance’, but understood the concepts when translated into related xiTsonga-words. Their frame of reference for antibiotics came from the tuberculosis and HIV epidemics, where they had learned that completing treatment and medication adherence were vital. This knowledge of antimicrobial treatment meant that some people were aware of the what antimicrobial resistance could mean by describing the concept very simply but accurately. There was a mix of experiences and understandings around adults and their children taking antibiotics. People wanted to receive more education about antibiotics from the nurses during clinic health talks and from the community health workers.

Conclusion: We now understand a bit more about people’s ‘seeking’, ‘reaching’ and ‘paying’ for antibiotics in rural South Africa. Most importantly their ability to ‘engage’ with and ‘perceive’ what antibiotics and antibiotic resistance are, were based largely on their prior health literacy, in relation to TB and HIV treatment. Health-workers can act as Antibiotic Guardians to ensure the community is informed about the infections for which antimicrobial medications are useful.
Temporal variation in confirmed diagnosis of fever-related malaria among children under-five by community health workers and health facilities between years 2013 and 2015 in Kenya

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Abstract Id: 14

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Background
Malaria case management continues to experience dynamic changes. Building community capacity is instrumental in both prevention and treatment of malaria. The World Health Organization (WHO) recommends utilization of well-trained and supervised community health workers (CHWs) to reduce the burden of malaria deaths among children under-five years of age in Africa. Longitudinally-tracked information on utilization of CHWs by communities in terms of trends in diagnosis of malaria in children under-five years of age is essential in influencing national and local malaria control policies and strategies.

Methods
A desktop review of a database of CHWs and health facilities for the period of three years between January 2013 and December 2015 was carried out. Analyses of association between the diagnosed cases and satellite-based rainfall, village and time (months and years) were carried out using a Poisson regression model.

Results
Analysis of malaria diagnoses by CHWs showed the following trends: (i) the incidence of reported documented malaria-positive fever cases increased with time (2013 to 2015) and the difference over the years was statistically significant (P < 0.001); (ii) specific village was significantly associated (P < 0.001) with reporting malaria-positive fever cases; (iii) the long-term monthly sequence starting from highest to lowest incidence of reported malaria-positive fever cases was July, May and June, March, August, April, September, November, and February, October and finally January, and the difference in reported malaria-positives between the months was statistically significant (P = 0.001) and, (iv) none of the tested rainfall regimes (current, lagged or cumulative) was associated with reported malaria-positive fever cases during the three-year period (P > 0.1). Looking at the number of diagnoses made at the health facilities: (i) the number of reported malaria-positive fever cases decreased with time (2013 to 2015) and the difference among the years was not statistically significant (P = 0.399); (ii) the long-term monthly sequence starting from highest to lowest number of reported malaria-positive fever cases, was July, June, May, April, January, August, March, February, September, November, October and December, and the difference between the months was statistically significant (P < 0.001).

Conclusions
CHWs have the potential to play a major role in diagnosing and treating malaria, thereby decreasing under-five children mortality. Temporally, the risk of diagnosing malaria by CHWs seems predictable and this may present further opportunities for policy-targeted malaria preparedness and control by integrating CHWs into health care delivery. The findings are expected to support policy actions that may scale-up community health services in remote rural settings.
Kenyan women’s preferences for place of delivery: A comparative study between Embakasi North sub-County and Naivasha sub-County, Kenya

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Background: Many sub-Saharan African countries have introduced health policies aimed at removing barriers to health service utilization including provision of certain health services free of charge. The Kenyan Government in 2013 initiated a free maternal health policy with an aim of reducing the costs for facility based delivery and subsequently increase health service utilization to reverse the high maternal mortality ratio. Despite the health policy, women continue to deliver their women outside of health facilities and utilization patterns reflected inconsistencies with women bypassing smaller primary health facilities that had been upgraded to provide deliveries and having their babies at tertiary health facilities. Concerns still remain around the health system factors that drive the demand for certain health facilities over others for facility-based delivery and the women’s perception of quality of care within these health facilities. This study aims to fill this research gap by using an innovative research technique increasingly used in health economics called discrete choice experiments to establish the attributes of health facilities that elucidate women’s preferences for place of delivery.

Objectives: The study aims to examine women’s preferences for place of delivery and establish attributes of the health facilities that drive women to choose facilities where they deliver their babies. The study will compare preferences of women in a peri-urban context in Embakasi North sub-County with those in a mixed agrarian, pastoralist and peri-urban context in Naivasha sub-County.

Methods: The study intends to utilize mixed methods framework incorporating both a qualitative study and a quantitative methodology known as Discrete Choice Experiment (DCE) to determine the most important health facility attributes preferred by women when choosing their place of delivery.

Conclusion: This study hopes to establish the relative importance of health facility attributes valued by women particularly in the peri-urban contexts of Nairobi and rural areas of Kenya where the quality of women’s health services are often neglected and use the preference information to inform policy makers and program managers both at the county health systems and the National Ministry of Health. This information should be used for establishing health policies that provide for resource reallocation to promote health equity and efficient service delivery within health facilities in Kenya.
Innovative mix of interventions for reducing HIV vulnerability amongst female adolescents and young persons: an action-research in Nigeria

Adolescents and young people (AYP) are especially at risk of HIV in Nigeria and the vulnerability of young females is even more acute because of early sexual debut, early marriage, transgenerational sex and transactional sex amongst other vulnerability factors. These factors have sociocultural contexts that vary across a multi-cultural country like Nigeria. One-size-fits-all approach is thus not appropriate to tackle them.

We carried out an action research aimed at reducing HIV vulnerability amongst female AYP population from different sociocultural backgrounds in four study states in Nigeria in 2017. We adopted the Breakthrough Series (BTS) Collaborative approach which focuses on accelerating improvement by capitalizing on shared learning or collaboration. Problems or problematic situations, termed changed topics, for which interventions could be carried out were identified in each study location. Using participatory approaches during meetings called learning sessions, specific and innovative interventions, termed change ideas, were developed. The change ideas were tested, studied, adopted, adapted or discarded at each location.

Our assessment shows that the change ideas that had reasonable success can be grouped into five classes:

1. Parental communication interventions: These are intervention that involve parents in the reduction of vulnerabilities of their children/wards to HIV. It usually should entail active engagement through already established communities such as women groups in churches or other social groups.
2. Peer to peer interventions: These are the types of interventions in which the services, which may be health education, condom distribution or referral for HTS or STI treatment is delivered by a trained peer.
3. Facilitator driven interventions: These are interventions that require a facilitator to be involved in direct delivery of services to the recipient throughout the life span of the interventions.
4. Non-traditional outlets (NTO) for condom distribution: The flagship interventions used included one in which the condoms where stationed in a particular location (e.g. hairdressing salon) and another where young persons were engage to distribute free condoms to their peers on request.
5. Social media-based interventions: Platforms such as WhatsApp are used to engage AYPs on behavior change communication.

Successful implementation requires the following: An initial objective assessment of the HIV vulnerability factors specific to targets of the intervention through formative baseline assessment or profiling; Interventions must be deployed in a mix based on the vulnerability factors identified and socio-cultural realities of the targets; Programming must be participatory throughout the process; and, Interventions should be started small and scaled up as successes are achieved.
Antimicrobial Resistance - An urgent need for Planetary and Ecosystem approach

Purpose:
Our planet is rushing towards the post antibiotic era and the abundance of scientific publications in the environmental dimension of antimicrobial resistance (AMR) supports its inclusiveness in planetary health agenda. Unfortunately, AMR is still emphasized as a public health problem and has not been addressed in the ecological perspective as a priority area to work on. The ecologists and earth scientists are not sensitized to this grave situation and not exclusively included in the control strategy.

Focus/Content:
The problem of AMR analogous to climate change and urged for an intergovernmental panel development to address the problem. The justification is quite logical in context of the global magnitude of AMR with multidisciplinary involvement in the pathogenesis and prevention pathway. Unlike the carbon emission in climate change issue, currently no set target is available for antibiotic use in different sectors and global regulation on pharmaceutical waste disposal. A more integrated implementation approach should be adopted for the resource poor settings due to the highest burden of AMR in LMICs with extensive environmental transmission. A less studied but enormous impact of antibiotics on the biogeochemical processes in the ecological system is the production of toxic gases like nitrous oxide or nitrite for the inhibition of nitrification denitrification, and anammox. Another important area to be explored is the magnitude and impact of antimicrobial resistance genes (ARGs) reaching the earth’s critical zone.

Significance:
Further studies on the standardization of the antibiotic residue level hampering normal ecological health and its impact at chronic environmentally relevant concentrations are of great importance to better addressing AMR issue. The prioritisation of antibiotics based on their detrimental effect on ecological processes is also necessary for regulatory purpose. The ecological theory describes the evidence based role of community ecology on individual gut microbiota including local environmental diversity and selection pressure. It is obvious that all ongoing policies for AMR prevention will fail if the intervention not taken for the ecological resistance reservoirs which may be irreversible in course of time.

Target audience:
In addition to medics and vets, people from multiple disciplines e.g. ecologist, earth and marine scientists, epidemiologists, ecological and health economists, microbiologists, wildlife experts, lawyers, pharmacologists, biochemists, hydrologists, metagenomics and modelling expert, social scientists must be called for action under the platform of planetary health. An international framework convention for AMR by adopting ecological public health approach can be a way forward.
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Abstract Id: 376

Health-System indicators of modern contraceptive use: Evidence from Performance Monitoring and Accountability 2020

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BACKGROUND: There is a dearth of knowledge on health-system indicators of modern contraceptive use among women in sub-Saharan Africa. The Systems Thinking Approach is a useful tool in examining how health systems influence the utilization of modern contraception. The study assesses how components of a health system influence the uptake of modern contraception among women in Ghana, Kenya, and two large population states in Nigeria.

METHODS: This study used service point delivery and female respondent surveys of the Performance Monitoring and Accountability 2020 data (PMA2020), a Family Planning 2020 initiative. The analytical sample was limited to women with a demand for contraception. The following indicators of healthcare service delivery were assessed: user-fees, visit by health worker, type of health facility, service integration, adolescent reproductive-health service, density of healthcare workers, and regularity of contraceptive services. Association between modern contraceptive uptake and health service indicators were examined with Chi-Square tests and multiple logistic regression models.

RESULTS: The study contained 1285, 1955, and 1066 respondents from Ghana, Kenya, and Nigeria respectively. Modern contraceptive prevalence rate for this sample of respondents was 33.2%, 68.9%, and 22.7% in Ghana, Kenya, and Nigeria respectively. Compared to those who do not utilize modern contraceptives, women using modern contraception have higher odds of being visited by a health worker in Ghana and Nigeria (OR=1.63; 95% C.I.=1.11-2.42 and OR=2.97; 1.56-5.67 respectively). Also, modern contraceptive use was higher among Nigerian women residing in an area with a health facility that delivers adolescent reproductive-health service (OR=2.05; 1.05-3.99). Furthermore, modern contraceptive use was higher among Kenya women in locations with a hospital or polyclinic (OR=1.91; 1.27-2.88). Furthermore, Ghanaian women had lower odds (OR=0.46; 0.23-0.92) of using modern contraceptives if they live in areas with fee-for contraceptive services while Kenyan women had higher odds (OR=1.40; 1.07-1.85) of using contraceptive services if they resided in such locale.

CONCLUSION: To our knowledge, this is the first multi-country study to examine health service indicators as predictors of modern contraceptive use among women in Ghana, Kenya, and Nigeria. Beyond individual and interpersonal factors, it is important to promote health-system indicators of reproductive health by fostering health financing and home-visitation programs that encompass contraceptive counseling and services.
Integrating neonatal clinical services into Ethiopia’s health system: are underprivileged communities receiving sound health care?

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Background

To address the high burden of neonatal mortality in lower- and middle-income countries, WHO recommends using injectable antibiotics when neonatal sepsis or very severe disease (VSD) are provisionally diagnosed. Ethiopia’s health system is leading the way in adopting this recommendation. Front-line workers - health extension workers (HEWs) - are trained to diagnose VSD and inject infants with antibiotics in community health facilities (health posts), so that neonatal-care services reach the most underprivileged rural communities. We evaluated the Ethiopian health service by comparing the management of sick newborns by front-line workers with the standard of care provided by health officers.

Methods

The study was conducted in 30 districts (woredas) across 12 zones and four regions of Ethiopia in December 2015. 240 health posts were assessed through multiple methods to triangulate HEWs’ potential to deliver VSD case-management services for neonates. Assessment included testing HEWs’ knowledge, clinical problem-solving (vignettes), and antibiotic-injection simulation. For clinical case classification, 893 infants under two months had an observed consultation with a HEW, after which they were re-examined by a health officer.

Results

97% of neonates were correctly identified as healthy by HEWs, indicating a negligible misuse of antibiotics. Our assessment of HEWs’ ability to inject newborns with intramuscular antibiotics - including hygiene practices, dose preparation and administration, and follow-up advice - showed a skills’ deficit of more than 50%. 56% of HEWs were unaware of any side-effects of the injectable antibiotics used to treat neonatal VSD. Only 30% of infants with VSD were correctly classified by HEWs. This indicates that a considerable proportion of sick infants were not receiving appropriate life-saving drugs at the health post. Almost 98% of HEWs were fully-trained to manage VSD cases in the community. However, their ability to correctly diagnose a sick infant also relied on opportunities to practise clinical skills, supportive supervision and clinical mentoring.

Conclusion

This study identified the potential of front-line workers to deliver critical newborn clinical services at the door-step in deprived rural communities. It also highlighted the need to sustain efforts to secure clinical mentoring and supportive supervision, and to build further capacity of the health force in the areas of theoretical understanding and practical challenges in clinical practice.
Promoting evidence to policy link in Nigeria: the health policy legislation discourses and dilemmas between researchers and State parliamentarians for changing mindsets

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Background: Evidence-informed health policy-making promotes the use of best available research evidence to guide all stages of policy process. But there is no proper uptake of research evidence into policy-making by decision-makers in low- and middle-income countries (LMICs). Uptake of research evidence into policy legislation process by parliamentarians is even almost non-existent in most LMICs. In Nigeria as in most LMICs the process of passage of bills into laws by parliamentarians is devoid of the demand for research evidence. A number of studies have reported researchers-policymakers engagements to promote evidence-to-policy link. Unfortunately, despite the critical role parliamentarians play in the policymaking process, similar engagements between researchers and parliamentarians are lacking.

Methods: We engaged 22 out of the 24 elected members of Ebonyi State Parliament (State House of Assembly), in south-eastern Nigeria in a one-day workshop to promote the use of research evidence for health policy legislation. The design was a cross-sectional study with a modified before-and-after technique used to evaluate impact of the workshop. Self-administered questionnaire structured in a 5-point Likert scale was used to evaluate their pre and post workshop knowledge and understanding of policy making/legislation and research evidence issues. Four health-related House Committee Chairmen provided key informant interviews. Data was analyzed using IBM SPSS software and thematic framework approach.

Results: Members of the parliament had inadequate knowledge (mean score MNS 2.21 out of 5) of electronic databases where research evidence can be obtained. Their pre-workshop knowledge and understanding of (i). process of getting research evidence into policy making and policy legislation; (ii). policy formulation and inter-sectoral collaboration in policymaking & legislation; and (iii). knowledge translation, ranged from MNS 3.32 to 3.75 on the scale of 5 points. The corresponding post-workshop values ranged from MNS 3.74 to 4.22 out of 5, giving the percentage increase ranging from 6.6% to 23.1% in the knowledge and understanding of the topics treated. A House Committee chairman interviewed noted that enacting evidence-based laws will ensure acceptance and compliance by the people. Another declared that inter-sectoral collaboration is important in solving societal problems and avoiding wastages. All Committee Chairmen suggested enshrining demand for evidence in the stages of law-making process as way of institutionalizing evidence-informed policy legislation.

Conclusion: Lawmakers lack adequate understanding of evidence use in policy legislation. Collaboration with researchers through capacity building interventions can be an effective strategy in improving their knowledge and use of research evidence for policy legislation.
Leonard Baatiema, University of Ghana, Australian Catholic University
Abstract Id: 2038

Developing a Policy Framework for Evidence-Based Acute Stroke Care in Low- and Middle-Income Countries

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Introduction

Stroke is a major public health issue in many low- and middle-income countries (LMICs). Despite the emergence of new effective interventions for acute stroke care, uptake is slow and largely inaccessible to patients in LMICs, and current health systems response has been inadequate. In this paper, we developed a policy framework to optimise access to acute stroke care in LMICs.

Methods

We draw on evidence from primary (in Ghana), and secondary (systematic reviews) studies. The primary studies were three separate but interlinked studies (surveys, qualitative in-depth interviews and retrospective cohort) in Ghana to understand the uptake of evidence-based acute stroke care interventions in Ghana. The secondary studies were two systematic reviews on stroke care in LMICs.

Results

The findings showed limited access to evidence-based acute stroke care in LMICs, compounded by inadequate health policy support and priority for acute stroke care. Retrospective cohort study data from Ghana showed high in-hospital mortality and morbidity by international comparisons. Qualitative study data identified four critical barriers at the patient, health system, health professionals and broader national health policy levels which could be targeted to strengthen existing health care system capacity to improve uptake of new treatment options for enhanced clinical outcomes.

Conclusion

Reconfiguration of LMIC health systems is required to optimise access to quality acute stroke care. Based on our findings, we propose a ten-point framework to be adapted to country-specific health system capacity, needs and resources:

1. Use emergency medical transport services to improve patient access to care at onset of stroke.
2. Create specialised stroke units, with thrombolysis as frontline treatment option to improve care.
3. Explore alternate models (centralised stroke and tele-stroke services) to optimise access to care.
4. Improve availability (24-hour access) and subsidise/absorb costs of brain scanning services.
5. Ensure stroke care is responsive to patients’ cultural and religious beliefs, values and practices.
6. Improve coordination and collaboration among providers for multidisciplinary stroke care.
7. Address the current human resource capacity deficit to treat and manage stroke.
8. Implement task shifting as a short term stop gap measure.
9. Create opportunities for staff professional development to improve quality of stroke care.
10. Establish a robust stroke register to support evidence-based health policy decisions.

While we recognise the challenges of implementing the recommendations in low resource settings, they can service as the starting point for advocacy and prioritisation of interventions depending on context.
Balázs Babarczy, National Healthcare Service Center
Abstract Id: 2786

Working towards SDGs through informing health policy with the best available evidence: first steps in Hungary

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Purpose

The Regional Office for Europe of the World Health Organisation (WHO) contributes to attaining Sustainable Development Goals (SDGs) in health through multiple programmes, including the European Health Information Initiative, Health 2020, and the Action plan to strengthen the use of evidence, information and research for policy-making in the WHO European Region. For progress to be made in this context, health policies informed by the best available research evidence are key. The Evidence-informed Policy Network (EVIPNet) Europe, a regional arm of the global EVIPNet initiative, promotes the use of health research in policy-making and strives at institutionalising knowledge translation (KT) through the establishment of national knowledge translation platforms (KTP).

Focus

The Hungarian EVIPNet team has carried out a situation analysis on health system research and knowledge translation at the national level. Based on its findings, a pilot KTP was set up, which proceeded to develop an evidence brief for policy (EBP). Upon request of Hungary’s Ministry of Human Capacities it summarizes published global and local evidence on antibiotic misuse in the country, proposing three evidence-based options to respond to the national problem. In December 2017, a policy dialogue on the EBP’s findings and conclusions took place with a wide range of participants. The policy dialogue helped reinforce and make explicit professional consensus about the importance of the problem of antibiotic misuse in the country, and find concrete ways of implementing its proposed options: antibiotic stewardship, development of medical education and communication interventions. Several consequential projects are already underway. Positive feedback about the brief also contributed to foster KT institutionalisation efforts.

Significance

Antibiotic misuse is one of the main factors behind antimicrobial resistance which, in turn, is a major threat to our ability of combatting infectious diseases and is consequently a vital issue regarding the attainment of SDGs. This paper aims at drawing the conclusions of developing an EBP on this topic, identifying key lessons learned about strengths and weaknesses of the process, which could be used in future knowledge translation exercises.

Target audience

The paper is primarily addressed to experts interested in knowledge translation and implementation science, who act or consider serving as knowledge brokers on a national or international level. It is also of relevance to policy-makers who would like to develop or reinforce the use of evidence in decision-making, as well as to national and international organizations supporting these intentions.
Arun Bahuleyan Nair, ACCESS Health International  
Abstract Id: 2680  

**Comparative Analysis of health insurance and assurance programs for developing the framework and institutional mechanism of Integrated Health Protection Program in Kerala, India.**  

Co-authors: Arun Bahuleyan Nair-ACCESS Health International; Rajeev Sadanandan-Department of Health and Family Welfare, Government of Kerala  

**Background**  
Kerala, a State in India has achieved impressive health indicators which have resulted in the State being perceived globally as an exemplar. But the State faces a huge burden on non-communicable diseases, along with ageing population which has resulted in very high out of pocket expenditures on health services especially hospitalization. In the last five years, the State Government have initiated various health insurance and assurance programs, providing hospitalization coverage to reduce the burden of out-of-pocket expenditure to poor and marginalized households. The State has currently adopted the Sustainable Development Goal 3.8 of achieving Universal Health Coverage and set the target of providing financial risk protection to 80% of the population through prepayment schemes by 2020.  

**Objectives and Scope:** The main objective of the study was a comparative analysis of design, benefit package, provider payment mechanisms, institutional and governance structures of existing health insurance and assurance programs for developing the framework of implementing integrated prepayment model for Universal Health Coverage in Kerala.  

**Methodology**  
The study used a mixed methodology which included secondary data analysis based on key program indicators and in-depth interviews scheme administrators to develop the comparative analysis. A comparative matrix of scheme design, benefit package, provider payment mechanisms, costing of provider payment mechanism of existing programs was undertaken in the first phase. In the second phase, the claims data of these schemes were analyzed to understand the utilization pattern and cost variation across seven major programs. A structured questionnaire was used to collect information on various critical areas of scheme administration.  

**Discussion**  
The analysis of program indicators which includes eligibility criteria, enrollment process, provider payment mechanism, financing sources and monitoring mechanisms found significant overlaps leading to high administrative costs. While analyzing the service delivery of existing programs, it was found that majority was through public hospitals, but the differences in benefit packages and implementation guidelines has led to ineffective provisioning of services. The historical claims analysis of programs provided the utilization pattern of the benefit packages and the differences in costing of similar packages within these programs. The utilization pattern was also compared with the claims and costing data of similar schemes in other Indian states to develop the benefit package of the integrated health protection program for Kerala. Review of international experiences and similar programs in other states were used to develop the institutional framework for implementing the integrated prepayment program.
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Abstract Id: 598

Design and deployment of health complexes in line with Universal Health Coverage by focusing on the marginalized population in Tabriz, Iran

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Abstract:

Background: Given the increasing rate of global urbanization, marginalization and health status of marginalized populations, although with a different severity, became an important issue for all nations and countries. Consequently, the issue of slums have been addressed directly under the goal number 11 of Sustainable Development Goals. Following the results of the 2015 census conducted by the Ministry of Health and Medical Education in Iran, ten million individuals lived in slum areas (2015), of them 0.5 million individuals resided in the suburb of Tabriz, a city located in North-West of Iran. In line with the national Health Transformation Plan (HTC) initiative (2015), health complexes were designed and deployed to make a step forward towards UHC by focusing on marginalized populations. Our study assesses the impact of HTC on improving access to health care service and UHC goals among marginalized population by implementing health complexes in Tabriz, Iran.

Methods: We conducted face-to-face interviews and reviewed documents in this regard. We also used quantitative data to compare before and after implementing HTP. The data was collected and analyzed by two separate teams (national and provincial).

Results: We found evidence that following the implementation of the health complex strategy in marginalized areas in Tabriz, the number of health institutions and healthcare workers increased significantly, as well as the detection rates of certain diseases (diabetes and cardio-vascular diseases). Our study showed that essential packages and supportive services provided to marginalized populations, as well as managerial practices and payment methods were used much more efficiently following the HTP implementation.

Conclusion: Designing and deploying the health complexes in slum areas of Tabriz was a successful experience to improve the health situation of marginalized populations which is in line with Universal Health Coverage goals. This experience of implementation should be considered for other slum areas in the country.

Keyword(s): Universal health coverage, health complexes, marginalized populations
Impact Evaluation of a Leadership Program Based on Bridging Leadership Framework on Health Service Systems of Poor Communities

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Using a Bridging Leadership Framework that incorporated Theory U and dialogue processes, ZFF developed the Community Health Partnership Program (CHPP). This leadership program was aimed at transforming local chief executives (LCEs) and community leaders in poor areas into ‘owning’ health concerns of their communities and forging partnerships with municipal health officials (MHOs). In 2014, three cohorts of LCEs, MHOs and their health teams had been beneficiaries of this program. This evaluation study aims to determine whether there had been changes in leadership and governance, health systems, maternal and infant mortality and sustainability of these outcomes due to CHPP.

Twenty-nine municipalities that joined the ZFF CHPP were included. For each municipality, a matching control with similar income level was identified. LCEs, MHOs, chair for health of local health boards (LHB), community leaders and clients of health services were interviewed regarding health governance, health planning, health systems and services, community participation and perceived community health status. Participants of the CHPP training were asked to rate their bridging leadership competency skills.

Analysis consisted mainly of comparing characteristics of ZFF cohorts and control municipalities according to outcomes in the evaluation objectives. Chi-square tests were used to assess statistical significance of these differences. Poisson regression analysis was done to examine the trends in maternal and infant mortality in ZFF cohorts. Paired t-test was used to compare pre and post-training assessments of bridging leadership competencies.

Results showed that compared to control municipalities, the ZFF cohorts had more active LHBs, more LCEs apparently concerned with maternal and child health (MCH) issues and participative in formulating health plans, more likely to have clear processes and greater participation of stakeholders in health planning, more use of health information, offered more MCH services, and had higher proportions of clients observing significant changes in community health status. There were marked decline in maternal mortality and increase in facility-based and skilled-birth attendant deliveries in ZFF cohorts, however, no clear declining trend in infant mortality ratio was found. LCEs in ZFF cohorts showed more confidence in sustaining health improvements. Participants retained bridging leadership skills acquired during CHPP training. The failure, however, to provide concrete plans by respondent leaders makes sustainability of the CHPP program uncertain.

The adoption of the CHPP program to bring about improvements in leadership and governance, local health systems, utilization of MCH services and maternal mortality is highly recommended. However, sustainability of the program has to be addressed.
**Practitioner Expertise to Optimize Community Health Systems: Harnessing Operational Insight**

Co-authors: Caroline Whidden; Madeleine Ballard-CHW Impact Coalition; Ryan Schwarz-Possible; Ari Johnson-Muso; Dan Palazuelos-Partners in Health; Sean Church-Living Goods; Lisha McCormick-Last Mile Health; English Sall-Sall Family Foundation; Kevin Fiori-Hope Through Health

**BACKGROUND:** To harness the potential of community health workers (CHWs) to extend health services to poor and marginalized populations and avoid the pitfalls of the post-Alma-Ata period, there is an urgent need to better understand how CHW programs can be optimized. **OBJECTIVE:** Understanding that several operational questions are unresolved by current academic evidence, six organizations that have developed high-impact CHW programs with governments and communities across the globe (Hope Through Health, Last Mile Health, Living Goods, Muso, Partners In Health, and Possible), have come together to identify insights from their implementation experience. **METHODS:** The standard operating procedures of each implementing organization were compared and areas of alignment or variation were noted as well as areas where outliers exist. To further explore heterogeneity and outliers, one-on-one interviews were conducted with implementers. **RESULTS:** The comparison of the operational practice of these organizations has revealed several areas of alignment. The implementing organizations have summarized these areas in a series of eight design principles that, in their experience, drive programmatic quality and are debated or not commonly found in programs across the globe. **CONCLUSIONS:** Further articulating and universalizing an operationally specific quality standard demands a broader coalition. The authors commit to build on this initial body of work and propose key recommendations for how this might be done.
Jianan Bao, King's College London
Abstract Id: 3933

THE DISTRIBUTION AND BURDEN OF MULTIMORBIDITY IN OLDER ADULTS: A CROSS-SECTIONAL ANALYSIS IN CHINA, INDIA AND LATIN AMERICA

Co-authors: Jianan Bao-King's College London; Matthew Prin-King's College London; Martin Prince-King's College London

BACKGROUND
Multimorbidity is a complex concept spanning biopsychosocial domains, and a major challenge for the health and social care systems. This exploratory study aims to create an evidence base around the distribution and burden of multimorbidity amongst older people in middle-income countries to inform future research, clinical practice and service development.

HYPOTHESIS
Multimorbidity is associated with socioeconomic deprivation, and is also associated with mental health comorbidities, increased healthcare utilization and care dependence.

METHODS
A community survey carried out by the 10/66 Dementia Research Group in China, India, Cuba, Dominican Republic, Mexico, Venezuela, Peru and Puerto Rico of over-65 year olds provided the basis for this cross-sectional data analysis. Multimorbidity is made up 15 physical impairments, mental and physical health conditions. Dementia, depression and anxiety are assessed using the Geriatric Mental State and AGECAT algorithm. Social care costs are estimated from time spent on informal care and minimum wage of the country, and converted to international dollars for comparison. The standardized prevalence of multimorbidity is presented. The cross-sectional association between socioeconomic factors and counts of multimorbidity, between multimorbidity and mental health comorbidities, healthcare utilization, care dependence and social care costs are examined.

RESULTS
Multimorbidity (2 or more conditions) affects between 39-68% of older adults in this study, with the highest prevalence in the Dominican Republic and lowest in China. Indicators of socioeconomic deprivation are associated with higher counts of multimorbidity. Socioeconomic factors are independently associated with mental health comorbidities but not care dependence. Multimorbidity (per incremental increase in count of condition) is associated with mental health comorbidities (pooled PR 1.28, CI 1.25-1.31) and dependence (pooled PR 1.38, CI 1.35-1.41). Multimorbidity is associated with increased utilization of all community health services (primary care, hospital outpatients and private doctors), though patterns of utilization vary between countries.

DISCUSSION
The high prevalence of multimorbidity, and the increasing prevalence of mental health comorbidities and dependence at higher counts of multimorbidity demands broader competencies of clinicians looking after older adults. Integrated and affordable healthcare services are needed to provide quality and equitable healthcare for people with multimorbidity, especially as it most effects socioeconomically deprived individuals.
Applying the Consolidated Framework for Implementation Research to health systems research: lessons learned from a process evaluation of the Health Workforce Program in Liberia

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Purpose/significance/target audience
Using the Consolidated Framework for Implementation Research (CFIR) in HSR can strengthen and streamline assessments of complex or multi-country interventions, generate results that can be repurposed for planning or adapting future interventions, and contribute to a broader knowledge base of implementation issues in complex health systems programs. Lessons from its use in a process evaluation of the Health Workforce Program (HWP) in Liberia will be presented, with implications for wider use of the approach by program implementers/managers and researchers/evaluators.

Focus
The CFIR aims to improve implementation of innovations by providing a structured, yet flexible, set of external and internal constructs associated with implementation success. Its 26 main constructs, organized into 5 domains, were distilled from a review of 19 models and publications primarily focused on translating research into practice in health settings. The CFIR can be used to inform design as well as research of programs or interventions while building an implementation knowledge base across contexts and settings (Damschroder et al., 2009).

The CFIR seems well-suited to providing an approach to assessing and organizing knowledge for complex interventions like those often found in HSR. Its constructs can help ground and streamline research design in a still-emerging model of development. CFIR’s structured approach also supports the compilation of a body of knowledge around systems-level interventions that can be used by others. For example, understanding how an intervention’s source (a CFIR construct) is perceived as part of a broader assessment of an intervention’s characteristics (a CFIR domain), and ultimately whether that facilitated or hindered implementation (e.g., is the group that designed the implementation seen as legitimate, by whom, and why) can inform future work for that context.

However, according to recent review of CFIR usage, only one of about two dozen published studies used it in low/middle income HSR since 2009 (Kirk et al., 2016). In addition, the review highlighted unrealized CFIR applications in designing research tools, documenting construct usage and refinement, and synthesizing knowledge bases from studies.

Our use of the CFIR for the 2017 Liberia HWP process evaluation fills some of these gaps. We used CFIR constructs to cross-check interview guides, developed a process to select constructs for transcription coding, and used CFIR to identify areas of emphasis in the final write-up. We will discuss these experiences, along with ways to extend CFIR constructs/construct relationships for HSR and using CFIR to build a knowledge base for improving health systems interventions.
Improving the qualité of the service: Cross-functional coaching between District Medical Officers (DMO) to reinforce good leadership practices

In recent years, Senegal has been working to improve the quality of services offered to achieve Universal Health Coverage (UHC).

The importance of virtuous leadership within the health system in improving the quality of services and performance in general has already been demonstrated; indeed, it leads to an improvement of the work climate and a satisfaction of the staff through the impulse of positive values. However, the review of health policy documents in Senegal revealed that despite disparities in performance in the districts, no strategic direction is put in place for the development of leadership skills as a means of improving the quality services. The literature on leadership in the health field is poor. They are almost non-existent in terms of strengthening the skills, approaches and techniques of District Medical Officers (DMOs) in good leadership practices; assessment of performance criteria in the health sector and their association with leadership. It then becomes essential for a better efficiency of investments and strategies implemented to move towards UHC, to rely on innovative approaches that can reinforce and extend the practice of transversal virtuous leadership in order to improve the performance of the health system. The premise is that stimulating exchanges within a DMO community can improve district performance. So, what are the good leadership practices of the DMO associated with good district performance? And how to strengthen the transversal transfer of skills and experiences between DMOs.

This protocol, which is a mixed study (qualitative and quantitative) with an intervention component to be documented, aims to revisit the important question of quality in UHC by looking at a major determinant of quality: leadership. This undeveloped site in the health sector reflects all the originality and innovation of this work.

This is a cross coaching between DMOs still called transversal coaching or peer coaching will be used to reduce performance disparities.

Implementation will take place in four phases: (i) identification of successful DMOs (ii) identification of the leadership characteristics of successful DMOs (iii) transversal coaching by identified DMOs (iv) capitalization and documentation of the intervention.
A National Quality Strategic Framework for South Africa – an Imperative for NHI

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Purpose: A clear agenda for quality healthcare, through the right to health enshrined in the Constitution, has been expressed in numerous policies in South Africa since 1994. Despite this, stark differences between the actual and desired quality of health services have been experienced by communities, and the health system has not achieved health outcome improvements hoped for.

The 2007 national policy on Quality of Care (QOC) aimed to improve access, eliminate inequities and increase safety in healthcare. It was conceptually sound, but lacked actionable strategies, which could contribute to improvements in quality of health care.

More recently, there has been a proliferation of quality initiatives including Accreditation, the National Core Standards, Office for Health Standards Compliance, the Ideal Clinic Programme, Best Care Always and several PEPFAR interventions amongst others. These have largely been uncoordinated and fragmented across public and private sectors, and predominantly focused on the Quality Assurance aspect of the Quality spectrum. The lack of sustained quality improvement processes has meant that there has not been a significant impact on health services and health outcomes.

Focus: A policy review and situational analysis of quality initiatives across South Africa to leverage best practices were conducted to inform the development of a multilevel national quality strategic framework. The framework was drafted to institutionalize and guide national strategy, planning, delivery and measurement of a high quality health system for quality in healthcare. The process included a desktop review of published and unpublished literature as well as key expert and stakeholder engagement.

Significance: The successful implementation of Universal Health Coverage through National Health Insurance requires a foundation of quality healthcare. An overarching national quality strategic framework, which provides stakeholders with a common understanding of the quality spectrum, can facilitate policy coherence and locate initiatives in the quality planning cycle in order to improve co-ordination and implementation of quality strategies at scale, and provide metrics to monitor and measure outcomes.

The imperative for this work is clear – “Without quality, the NHI will fail” (Dr Precious Matsoso, 2018, National Lancet Commission for High Quality Health System in the SDG Era).

Target audience: Policy-makers, health system and program managers, researchers
Can family life education programs shape resilience against early marriage, depression and wellbeing? : Evidence from a study on adolescents in UP and Bihar

Co-authors: Nandita Bhan-University of California, San Diego; Emma C Jackson-University of California, San Diego; Namratha Rao-University of California, San Diego; Anita Raj-University of California, San Diego

Background

Family health education (FLE) programs, delivered in schools and communities, hold the promise of shaping resiliency and addressing health inequities among adolescents. In India, where 250 million of the world’s adolescents aged 10-19 reside, FLE programs may be a remedial agent, buffering adolescents, particularly girls, against risks such as early marriage, trauma from experiences of violence, and depression, suicidality and self-harm behaviors. In 2014, India introduced Rashtriya Kishor Swasthya Karyakram (RKSK), a multi-sectoral adolescent development initiative, using school, community and peer-based influences to increase knowledge of and access to sexual, reproductive and mental health services and social support. We examine whether exposure to FLE buffers against risks of early marriage and depression, suicidality, and self-harm in adolescents, adjusted for education, parental violence and context.

Methods

Cross-sectional data from 15-19 year old (n=16857) boys (n=3885) and girls (n=12972) in UP and Bihar were analyzed. We examined the association between exposure to FLE (through NGO, government, school or other sources), knowledge of RKSK, and years of education on marriage before 18, depression (assessed using PHQ-9), suicidal ideation and self-harm behavior, adjusted for parental violence, wealth quintile, area of residence and state using logistic and multinomial logistic regression models.

Results

In the sample, 16.6% reported receiving FLE (boys=7.97%, unmarried girls=24.2%, married girls=14.4%) and 2.88% reported knowledge of RKSK. Among girls, FLE was associated with lower likelihood of marriage before 18 years [AOR=0.71 (0.63, 0.81)]. Attending FLE was not associated with depression or suicidality. Witnessing and experiencing parental violence was associated with higher odds of marriage before 18 years [AOR=1.15 (1.06, 1.34)], moderate-severe depression [AOR=1.56 (1.35, 1.81)] and self-harm behavior [AOR=2.58 (2.14, 3.09)]. Being married between ages 15-19 was associated with higher depression [AOR=1.39 (1.23, 1.56)]. Living in rural areas was associated with greater likelihood of being currently married [OR=1.38 (95% CI: 1.27, 1.50)]. Girls in Bihar were at greater risk of early marriage [AOR=2.94 (2.68, 3.23)], but at lower risk of suicidality and self-harm behavior [AOR=0.77 (0.65, 0.92)].

Discussion

FLE programs can be a platform for developing holistic, gender-equitable and resiliency-based curricula and interventions that consider experiences of socioeconomic adversity and violence, along with providing knowledge and resources to address challenges to health and wellbeing. Understanding specific pathways linking early adversity, FLE programs to health and wellbeing can provide greater insight into the determinants and drivers of adolescent resiliency and development.

Data provided by Population Council India. Funding provided by Packard Foundation, ; 2017-66705.
Health Service Delivery and State Legitimacy in Nepal’s Madhesh: A Study of Health Governance and Identity-Based Conflict in a Fragile State

Co-authors: Sudip Bhandari-Johns Hopkins University Bloomberg School of Public Health

Background

Improving the delivery of state services is fundamental to achieving state legitimacy in fragile and post-conflict states. This research investigated how Madhesis, an oppressed ethnic minority in Nepal experience state health care services, which is delivered largely by the ethnic majority, Pahadis. The study analyzed the relationship between the recipients’ perceptions about these services and their views on the state’s legitimacy within the health service domain.

Methods

This qualitative study was conducted among Madhesis who live in the Parsa district of southern Nepal. Multiple methods were employed for the investigation: an extensive literature review, a focus group with 11 Madhesi recipients of government services in the Pipra Ward of the district, and 25 semi-structured interviews with Madhesi patients and Pahadi frontline healthcare practitioners in the Narayani sub-zonal hospital, a state-run health facility in the district.

Findings

A majority of Madhesis held favorable views about health services received and the health service providers who are mostly Pahadis. Madhesis did not question the state’s legitimacy within the healthcare domain either, and, in fact, praised the government’s sense of obligation to provide free and equitable health services. The skepticism and discontentment actually arose from healthcare providers who found Madhesi patients to be ill-behaved and distrustful of their medical decisions. Health workers at times felt their authority challenged by the Madhesi patients and their family members.

Interpretation

The discrepancies in perspectives about the relationship between the ethnic majority and the minority could be explained by their frame of reference. While the health care workers mostly viewed their clients in terms of ethnicity, the clients viewed the workers in a professional light where the health care provider-patient relationship overshadowed ethnic divisions. The positive evaluation by Madhesis of the state’s legitimacy could be attributable to the spillover effect of their approval of the health care workers who are the extensions of the state.

This study provides opportunities for Nepali health policy makers to understand the perspectives of health services recipients in Madhesh, develop new policies that could address challenges faced by the ethnic minorities, and also expand on success areas to strengthen state legitimacy.
Suraj Bhattarai, Nepal Academy of Science & Technology
Abstract Id: 1638

**Strengthening Health Systems Research capacity of Young health professionals: a multidisciplinary and decentralized approach**

Co-authors: Suraj Bhattarai-Nepal Academy of Science & Technology; Neesha Rana-Nepal Academy of Science & Technology; Nuwadatta Subedi-Gandaki Medical College; Pramesh KC-Kathmandu School of Management and Information Technology; Jibaraj Pokharel-Nepal Academy of Science & Technology

**Background**

Scientific research in Nepal is still in a primitive stage. Although there is a growing research interest among early-career healthcare professionals, there are so many factors which stop them from moving forward. Inadequate knowledge and skills on Health System Research (HSR), unavailability of mentors or peer groups, and lack of funding are among major obstacles. The main objective of this training program, therefore, was to enhance the participants’ knowledge and skills in HSR project development. Nepal Academy of Science and Technology (NAST) received support from Inter Academy Partnership (IAP), a global network of national academies, to coordinate this project.

**Methods**

Young Health Professionals Research Training Project is a part of the capacity building training program of Nepal Academy of Science & Technology. In 2017, a series of training workshops were organized in three different cities: Kathmandu, Pokhara, and Chitwan, thus targeting young researchers across the country. Nepal Health Research Council (NHRC) at the Ministry of Health nominated a panel of scientists to develop HSR course modules which covered the nitty-gritty of HSR proposal development, data collection tools and techniques, data management and analysis skills, report writing skills, and tips on effective scientific publication. After the completion of training, all participants were asked to submit a research proposal for evaluation. Top nine entries were then awarded small research grants.

**Results**

A total of 154 young professionals comprising 55 clinicians, 45 nurses, 17 public health officers, 11 basic science tutors, 10 pharmacists, and 16 allied health sciences researchers were directly benefitted by the training project. There were 102 females and 52 male participants who represented 60 different medical or research institutes of Nepal. Almost all participants provided a positive feedback regarding the content and quality of research training. They also appreciated the initiative of extending such program beyond Kathmandu city - decentralized approach. A majority of them agreed that the knowledge and skills gained would be useful while conducting their current and future research projects. As an offshoot of this project, there is a huge demand for further training in suburban settings.

**Conclusions**

The model of Health Systems Research training, which became successful in strengthening the research capacity of early-career researchers of Nepal, could be replicated in other research-lagging communities too. Additionally, all stakeholders need to support the enthusiasm of young researchers by fostering mentorship culture and reinforcing sustainable training approach in LMICs.
Soumyadeep Bhaumik, The George Institute for Global Health, India
Abstract Id: 1841

Diversity in editorial boards of specialty global health journals

Co-authors: Soumyadeep Bhaumik - The George Institute for Global Health, India

Introduction:

The issue of diversity in global health leadership has come under intense scrutiny recently. Being an editor in a journal is a mark of leadership. Diversity in editorial boards of specialty global health journals has not been studied previously.

Methods:

We searched for global health specialty journals in the NLM, USA Catalog and obtained information pertaining to editors from journal websites. We excluded any individual whose role was not designated specifically as an editor. We determined gender using a sequential approach: individual editor description or photographs in journal website; using a website called genderize.io (cut-off certainty score ≥ 0.95); individual editor description or photographs in institutional website; author inference from or marked unclear. Countries of origin of editors were classified by region and income status as per World Bank Classification. We scored journals on the basis of a composite editorial board diversity score (CEBDS) by adding up scores for gender diversity (0 to 4), country income classification diversity (0 to 3) and regional diversity (0 to 3). Journals were considered having poor diversity if CEBDS was 0 to 5, moderate diversity if CEBDS was 6 or 7 and good diversity if CEBDS was 8 or above.

Results:

We retrieved 71 journals out of which 27 were finally included. These journals had a total of 303 editors - 40.2% were females; 67.98% were from high income countries; 33.66% were from Europe and Central Asia and 30.03% from North America. Amongst editor-in-chiefs only 27.02% were females and 72.9% were from HIC countries. Only 7 journals had a score of 4 in gender diversity domain (meaning they had 40-60% females editors); 2 journals had a score of 3 in income classification level domain (meaning they had at least one editor form all income groups), and; 3 journals had a score of 3 in regional diversity domain (meaning they had at least one editor from at least 6 regions). Overall only 5 journals had moderate diversity and 3 journals had good diversity as per the CEBDS.

Conclusion:

Gender diversity, regional diversity and representation of editors from low and middle-income countries were extremely poor in specialty global health journals. Future studies to understand barriers and enablers for diversity in editorial boards is warranted but affirmative action by journal publishers might be considered to enable diversity of perspectives.
Beyond Production: Using Health Expenditure Information to Inform Decisions for Universal Health Coverage

Co-authors: Heather Cogswell-Abt Associates; Karishmah Bhuwanee-Abt Associates; Tesfaye Ashagari-Abt Associates

Background: Health expenditure data is crucial to help countries make decisions to achieve Universal Health Coverage (UHC). However, countries can get stuck producing data that remain unused, while key decisions for UHC are made without using available data. We address two critical questions: 1) Are there factors associated with more consistent use of health expenditure data? and 2) Can those factors be structured into a framework to support other countries to systematically use their data to inform policy?

Methods: Through a survey of over 60 government technicians and policymakers from over 40 countries, structured interviews with technical experts, and a literature review, we developed a framework that details the key factors facilitating the use of health expenditure data for decision making. We apply the framework to 16 countries to test the validity of the framework and to identify lessons for other countries.

Results: Our "Resource Tracking Data for Policy Framework" details key factors that facilitate the use of health expenditure data for decision making, centering on (i) clearly identifying the data need, (ii) high-quality production of analysis, and (iii) packaging and disseminating the analysis.

We find that countries that made tangible policy decisions to achieve UHC all scored highly in the three dimensions of our framework. Of the 16 countries that the authors applied the framework against, seven (Ethiopia, Burkina Faso, Bangladesh, Vietnam, Namibia, Barbados, and Benin) successfully used health expenditure data to achieve policy changes.

Discussion: The framework developed by the authors is consistent with the experience from 16 countries. This framework provides useful lessons for countries about how to produce, package and disseminate high-quality health spending data that will help the design, implementation and monitoring of reforms for UHC. We will share specific ways that the seven countries used health expenditure data. We will also share other factors that affect decision-making more broadly, which the authors found during the course of this study. Achieving UHC is technically and politically complex and requires decisions to be made on an ongoing basis. The framework and lessons provided will help remind countries that high-quality is necessary for making the right decisions for UHC, but that it is not sufficient. A more holistic approach is needed to ensure data gets used to make the right decisions on the path to UHC.

This abstract is based on a manuscript published in the Health Systems and Reform journal on 21 February, 2018 https://doi.org/10.1080/23288604.2018.1440345
José Bispo Júnior, Federal University of Bahia
Abstract Id: 1397

Community Engagement in the Brazilian health system: between institutionalization and effective participation

Co-authors: José Patrício Bispo Júnior-Federal University of Bahia; Diane Costa Moreira-Federal University of Bahia

Background- Health sector reforms in Brazil brought about institutional mechanisms for participation since the 1990s. Accordingly, this study aimed to describe the mechanisms of social participation in the Brazilian health system and to analyze the performance of community participation at the local level. We seek to draw lessons from the Brazilian experience to strengthen the engagement of civil society in health systems. Methods- This is a qualitative study developed in two stages: (1) analysis of mechanisms of social participation in Brazil with the use of selected documents: Laws, ordinances and resolutions of the Ministry of Health and the National Health Council; (2) analysis of multiple cases about participation at the local level in six towns in the Northeast region. We performed in-depth interviews with 43 community health workers and 45 users of primary health care centers. We also used data from field observations made between March and December 2017. In order to analyze data, we used the thematic content analysis technique. Results- Brazil has a broad and innovative system of participation institutionalized in the health system. Health councils ensure social participation in system governance and foster accountability. Health councils are permanent entities and are present at all managerial levels. The architecture of these councils favors community participation, where half of the members are representatives of the users. Managers must necessarily submit health policies for approval in health councils. Nevertheless, the results of this study highlighted a low involvement of civil society in the participatory bodies. The main determinants of the weak participation were the poor quality of the services and the disbelief in the ability of the councils to interfere with the health policies. Community workers showed difficulties in mobilizing themselves to cope with social determinants. Community mobilization is conducted in a timely manner, focusing on specific actions, such as fight against dengue fever or immunization campaigns. Discussion/Conclusion- The establishment of health councils in all cities and states constitutes an important initiative for sectoral democratization and sharing of power between the State and society. However, only institutionalization does not ensure the effective participation of communities. The Brazilian lessons show the need to develop continuous mechanisms for community mobilization. In such context, health systems should have a high ability to respond to the demands and needs of citizens, otherwise it will provoke distrust and estrangement of participatory bodies.
Can the local media act as a facilitator for voicing community health care demands: A case study from Indian Sundarbans

Co-authors: Shibaji Bose-Independent Researcher; Upasona Ghosh-Institute of Health Management Research University

The study examines the potential for local print media to represent community demands for health care in the Sundarbans, a backward island region in Eastern India. It compares and contrasts perceptions of the producers and consumers of local health news. The purpose of the study is to understand whether the local media has the capacity to facilitate health demand of the community to health system managers.

The study takes mixed methods approach to explore the landscape of health news coverage in local newspapers in the Sundarbans. To understand the extent of health coverage, we scanned all local newspapers for one year and calculated descriptive statistics on number and length of health-related articles. We used qualitative tools to explore community and media actor perceptions about print news in Sundarbans. Thematic analysis was used to analyze the qualitative data.

The quantitative analysis of news coverage reflected that health is well covered in local newspapers in terms of number of news articles. The qualitative analysis found communities have both positive and negative perceptions about local media’s representation of community health. While community considers local media to be trustworthy and valued its reporting on local socio-political and cultural events, respondents were keen on building capacity to use research evidence. The struggle to make local papers economically sustainable emerged as most important contextual factor influencing the news making system.

Policy makers at district and local levels can engage and support local media as an alternate and community centric medium to learn about community demand and to increase community awareness of health issues. A structured and sustained knowledge sharing with the media on health systems would trigger a buy in of the media on health in the Indian Sundarbans. This is expected to create an enabling health policy environment which would act as a pull for increased reach and uptake of evidence based research.

The study has a potential to add to the existing knowledge in both in health system strengthening and media and communication research. It would also encourage researchers to take a multi disciplinary approach and integrate media and communication in health system studies on inter-sectorality to understand the flow of knowledge and attitudes for context driven research uptake.
Automated identification of missing communities to facilitate universal health coverage in rural settings

Background: Evidence suggests that very rural populations face significant barriers to accessing health care, experiencing some of the lowest coverage rates in access to essential health care services. A persistent barrier for health systems delivering services in very rural and remote regions is the accurate identification of all underserved communities in their catchment area when official census and vital registration data are unavailable, outdated, or otherwise limited.

Methods: We developed an semi-automated method for identifying communities in very rural settings using a type of machine learning, neural networks, that excels at detecting objects within images. Relying on publically available satellite imagery from both urban and rural locations, we trained the algorithm to detect individual buildings from aerial satellite images across location contexts. We then examined the degree of clustering between detected buildings to identify groupings that were suggestive of coherent community locations. The approach was then validated in southeastern Liberia using previously collected community location data from a large community health worker program and was used to identify missing communities within the catchment area of service delivery.

Results: Compared with existing community location data, the algorithmic approach correctly identified 68% (308 out of 451) of registered communities, and identified an additional 66 communities that had not previously been registered. The algorithm was able to achieve 86.47% positive predictive value and 79.49% sensitivity in unseen validation data with respect to the location of individual buildings. All of the data used in these analyses came from publically available sources, and the estimated computational costs of producing the estimates were approximately $12.30.

Conclusions: To our knowledge, this study the first study to apply advanced image recognition machine learning algorithms in the context of global health care delivery. While still very preliminary, these results suggest that satellite-based neural networks may serve as a fruitful complement to existing field-based data collection methods for identifying communities in very rural regions who may be underserved by local health systems. The ability to identify hard-to-reach and underserved populations is critical to health service delivery and resource planning efforts, and a useful step in advancing strategies for expanding health care coverage to very rural communities.
Barbara Burmen, Kenya Medical Research Institute  
Abstract Id: 643

**RISK FACTORS FOR TB INFECTION AFTER HOUSEHOLD EXPOSURE TO A TB INDEX CASE AMONG HOUSEHOLD CONTACTS AGED LESS THAN 5 YEARS, KISUMU COUNTY, KENYA, 2014-2015**

Co-authors: Barbara Kabai Burmen-Kenya Medical Research Institute; Kennedy Kipkoech Mutai-Kenya Medical Research Institute; Wilson Odero-Maseno University; Martien Borgdorff-Centers for Disease Control

**Background**

Kisumu county of Kenya is a high-TB burden (TB CNR 228 vs. 170 nationally per 100,000 populations in 2016), densely-populated (464.5 persons per km²) region with 17% of its population aged <5 years (children). The TB burden and the interaction of known risk factors for TB progression, among child contacts of TB index cases, have not been established because Contact invitation, rather than contact investigation is the norm. We determined prevalence and risk factors for TB infection among child household contacts.

**Methods**

A cross sectional survey, recruiting child contacts of TB index cases who underwent TB symptom, Tuberculin Skin tests (TST) and Chest X-ray screening, was conducted between 2014 and 2015 in Kisumu County. Prevalence of TB was identified using a cut off for TST positivity based on a bimodal peak. Hierarchical level modeling analyses, with children nested within households, was employed to describe TB index characteristics (including household information) and contact characteristics associated with TB infection.

**Results**

Of 257 child contacts linked to 183 TB index cases, 39.3% had TB infection based on a TST cut off of 5mm for positivity. This included 8 (3.1%) child contacts with TB disease. 37% of TB infection could be attributed to clustering. The probability of TB infection was significantly higher among child contacts of TB index cases, that had cough (OR 5.1, 95% CI 1.6-16.1), whose household size was < 25 m² (OR 3.7, 95% CI 1.0-13.3) and, that were 1st degree relatives of TB index case (OR 2.9, 95% CI 1.1-7.2), after fixing other contact and index characteristics.

**Conclusions**

Household clustering contributes to TB infection; a targeted contact investigation approach with ‘watchful waiting’ maybe employed for child contacts from specific households. Due to a high prevalence of TB infection, IPT administration among child contacts without TB is justified.
Sophie Faye, Abt Associates
Abstract Id: 3770

Building Trust in Guinea’s Ministry of Health Post-Ebola through a more transparent communication strategy

Co-authors: Sophie Faye - Abt Associates; Jean Damas Butera - Abt Associates; Lancine Conde - Abt Associates

When the worst Ebola epidemic in history hit West Africa in 2014, Guinea’s Ministry of Health (MOH) suddenly faced more than a medical crisis. It also found itself with a colossal communications challenge. At the time, the Guinea MOH had no systems in place to communicate with either the public or within the organization itself. Without tools to effectively communicate externally, including with the media, the ministry struggled to get important safety information to the public. By the time officials were able to engage with the media and raise awareness of the disease, the outbreak had already begun to spread.

To make matters worse, years of limited public communication and a lack of transparency had led to a complete mistrust in the public health system. Even after the crisis ended, many Guineans continued to mistrust the MOH, due in part to its delayed response during the epidemic.

The MOH realized it was time to create a robust, effective communication systems – not only to respond to health crises but, crucially, to build public trust. With guidance from USAID’s Health Finance and Governance (HFG) project, the MOH assessed its communications shortcomings and developed a strategy to turn things around. The plan calls for a strategic communications unit, an MOH spokesperson, a media relations attaché, a regional and district communications officer, and an intranet for internal communications – all firsts for the Guinea MOH.

This presentation will show results from the communication assessment and describe the process of creating and implementing the communication strategic plan. It will also share some of the early results of this strategy and the actions that were taken as part of improving the MOH communication with Guinean people.
Abstract Id: 647

Empowering Adolescents and Youths with Sexual And Reproductive Health Information Through Telehealth and Mobile Health Platforms in Uganda.

Co-authors: John Mark Bwanika - The Medical Concierge Group Limited; Davis Musinguzi - The Medical Concierge Group Limited; William Lubega - The Medical Concierge Group Limited; Louis Kamulegeya - The Medical Concierge Group Limited; Joseph Ssebwana - The Medical Concierge Group Limited

Africa has the youngest and fastest growing population on earth. Uganda, for example, has a fertility rate of 5.8 and close to 80% of its population is below 35 years of age. Healthcare programs for most countries are poorly funded and majority lack youth-friendly initiatives and spaces. Furthermore, there is widespread cultural barriers to getting credible information on health issues like sexual and reproductive health. As such, most adolescents and youths, do not adequate information to empower them to make critical life-impacting decisions regarding their sexual health choices. Fortunately, the last two decades have seen a phenomenal growth in the use of mobile phone communication platforms that help to break barriers and empower youths at individual level. This is exemplified by Uganda with 22 million mobile connections and 14 million internet users out of a population of 37 million. We sought to explore the value a telehealth platform and social messaging channels like Facebook, Whatsapp and Twitter can provide in breaking barriers to health information for youths in Uganda.

The Medical Concierge Group, a local Ugandan social enterprise runs a 24/7 telehealth centre with doctors and pharmacists providing real-time remote medical consultations. This is done through multiple mobile based channels including; voice calls, SMS, Facebook, Twitter and WhatsApp. The service is freely accessible to the public and partnerships with funding agencies like UNICEF, USAID and ministry of health help to subsidize the cost.

Over the last 4 years, the service has grown to attract approximately 30,000 interactions on a monthly basis across all platforms. Median age of users is 25 years and with a male to female ration of 60:40. Sexual and reproductive health queries form up to 50% of the reasons for usage. Issues range from Family planning methods, HIV Post-Exposure Prophylaxis, emergency contraception, abortion care and HIV prevention and treatment services. Majority of the interactions end in remote resolution while others culminate in correct referral to physical services. Most users report over 70% cost savings and prompt access to medical services as a result of the telehealth services.

Our service demonstrates how mobile phone platforms can be used to circumnavigate cultural and physical barriers to empower young people to individually access information on their sexual health issues. More widespread integration into mainstream healthcare programs has the potential for cost savings and improved service provision.

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Background: Increasing evidence shows that health inequalities exist between and within countries, and emphasis has been placed on strengthening the production and use of the global health inequalities research, so as to improve capacities to act. Yet, a comprehensive overview of this evidence base is still needed, to determine what is known about the global and historical scientific production on health inequalities to date, how is it distributed in terms of country income groups and world regions, how has it changed over time, and what international collaboration dynamics exist.

Methods: A comprehensive bibliometric analysis of the global scientific production on health inequalities, from 1966 to 2015, was conducted using Scopus database. The historical and global evolution of the study of health inequalities was considered, and through joinpoint regression analysis and visualisation network maps, the preceding questions were examined.

Findings: 159 countries (via authorship affiliation) contributed to this scientific production, three times as many countries than previously found. Scientific output on health inequalities has exponentially grown over the last five decades, with several marked shift points, and a visible country-income group affiliation gradient in the initiation and consistent publication frequency. Higher income countries, especially Anglo-Saxon and European countries, disproportionately dominate first and coauthorship, and are at the core of the global collaborative research networks, with the Global South on the periphery. However, several country anomalies exist that suggest that the causes of these research inequalities, and potential underlying dependencies, run deeper than simply differences in country income and language.

Conclusions: Whilst the global evidence based has expanded, Global North-South research gaps exist, persist and, in some cases, are widening. Greater understanding of the structural determinants of these research inequalities and national research capacities is needed, to further strengthen the evidence base, and support the long term agenda for global health equity.
Investigación sobre sistemas de salud y redes complejas: aportes al enlace ciencia – política desde un análisis de métodos mixtos

Co-authors: Mora Castro - Universidad Nacional Arturo Jauretche - Consejo Nacional de Investigaciones Científicas y Técnicas

Por distintos motivos existe una escasa comunicación entre la comunidad científica que estudia los sistemas en salud con aquellos tomadores de decisión del ámbito sanitario. Esto ha consolidado una distancia entre el conocimiento científico y la implementación de políticas públicas e institucionales en temas como la prestación de servicios, los programas de atención, las características de poblaciones vulnerables locales o la participación comunitaria en la promoción de la salud.

El objetivo de este trabajo es analizar un sector de la Red Sudeste del conurbano de Buenos Aires en lo que respecta al flujo de pacientes entre las instituciones de los tres niveles de atención, cuyo alcance poblacional es de aproximadamente 2 millones de usuarios por año.

En el marco de la Ciencia de Redes Complejas, se plantea un abordaje de métodos mixtos que articula técnicas cualitativas y cuantitativas de análisis. Por un lado, se recolecta y procesa información a partir de trabajos de campo antropológico en los centros de salud, observaciones y entrevistas a profesionales y a usuarios sobre el sistema de atención y, por el otro, se analizan los datos epidemiológicos del área. Esta estrategia identifica a los actores y los procesos sociales presentes en el ámbito sanitario a través de relaciones que pueden ser modelizadas con el Análisis de Redes Sociales. Este modelo relacional permite interpretaciones que emergen del procesamiento de datos y de las topografías de red apuntando a las características estructurales del sistema (centralidad de ciertos nodos, densidad de la red, formación de subgrupos, vulnerabilidad de ciertos esquemas de vínculos).

Los resultados parciales sugieren que existe un desequilibrio en la atención del área a partir de a) una sobrecarga del hospital que atiende el tercer nivel en el seguimiento de pacientes que ya pueden ser derivados a otros centros de menor complejidad b) fuerte presencia de pacientes de otras áreas vecinas. En este sentido, la red brinda los canales de derivación para resolver la atención de tercer nivel, pero parece encontrar obstáculos para articular el seguimiento de esos pacientes en su tratamiento posterior en otros centros de la red.

Se espera que este enfoque de los sistemas de salud aporte evidencia a la gestión para robustecer la prestación de servicios en áreas con necesidades puntuales, producto de trayectorias históricas y las dinámicas socioeconómicas y ambientales, que llevan a la población local a requerir una mayor protección por parte de las instituciones sanitarias de la región.
When and how should vertical programs be integrated into primary health care systems?

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Purpose. Historically, vertical programs have often excelled, at least compared to primary health care (PHC) systems, at channeling resources to service delivery at the community level. However, there is a concern that vertical programs lead to the development of parallel systems or broader system inefficiencies, challenges in long-term sustained coverage, and missed opportunities to manage multiple health concerns of individuals and families in a coordinated manner. Strategies have been developed to integrate vertical programs into PHC systems, including by combining inputs like financing, human resources, and infrastructure and/or broadening the service offerings of mainstream PHC providers, with the aim of making the health system more efficient and equitable for users. However, our limited understanding of the theories of change, methods for evaluation, and quantitative evidence for PHC integration makes it difficult for governments, donors, and implementing partners to deliberate and make decisions about integration effectively.

Content. We conducted an extensive literature review to (1) understand the arguments for and against integration, and (2) summarize available evidence on the effects of integration on priority outcomes for stakeholders of selected vertical programs and general health systems. We then adapted and applied a version of the Primary Health Care Performance Initiative (PHCPI) Conceptual Framework to analyze the benefits and risks of such integration. We validated this analytic framework by applying it to country case studies of integration of PHC with family planning, as well as illustrating its adaptability to analysis of other vertical programs, including HIV/AIDS, tuberculosis, maternal neonatal and child health, and immunization.

Significance and target audience. We found that the effectiveness and potential risks of integrating traditionally vertical programs into PHC are highly context dependent and involve varying tradeoffs in health system performance. Accordingly, we developed a transparent and evidence-based approach to discuss, debate, and make decisions on a complex set of policy choices regarding integrating vertical programs into PHC systems. The approach includes an analytic framework to estimate the benefits and risks of integration within various domains of a PHC system, from system-level governance, financing, and inputs, all the way to community-level service delivery. This approach aims to provide a common ground for discussion among vertical and horizontal constituencies within our target audience of policymakers, donors, and implementing partners, including civil society organizations and community-based providers.
Role of digitization in surveillance of Non-Communicable Diseases – A unique public private partnership model in Himachal Pradesh, India

Co-authors: Nayanjeet Chaudhury-Medtronic Foundation; Gopal Chauhan-Govt. of Himachal Pradesh; Komal Khanna-Abt Associates; Santosh Kumar Jha-Abt Associates; Jessica Daly-Medtronic Foundation

Background:

Health Rise is a multi-country demonstration project supported by Medtronic Foundation to improve diagnosis and management of diabetes and hypertension through strengthening local health systems, including capacity-building of frontline health workers and empowering patients and community in self-care practices. In India, Health Rise operates in Shimla (Himachal Pradesh) and Udaipur (Rajasthan) through unique public-private collaboration since 2015.

The quality of health data has remained a major challenge across India, particularly longitudinal tracking of chronic care patients. In late 2015, the federal Ministry of Health recommended an individual health card to be developed at each ‘sub-centre’, the healthcare facility closest to the community. The Health Rise project partners pro-actively supported the Govt. of Himachal Pradesh (HP) in developing an electronic Health Card, aimed at monitoring the trend of multiple non-communicable disease (NCDs) including their treatment compliance.

Methods:

The electronic Health Card is a digital application that empowers frontline health workers (FLHW) to generate prevalence data on several NCDs. The application captures information of individuals (30+ years) on conditions such as cancer, diabetes, cardiovascular disease, stroke, mental illness, kidney disease, respiratory disease and epilepsy and associated risk factors with following in-built features:

- Risk factors, screening, referral, diagnosis and treatment of NCD patients;
- Decisional support to health officials at all levels of care;
- Patients’ access to personal health information;
- Automated SMS alert for patients and FLHWs, enabling active follow-up.

Currently the government FLHWs, called Accredited Social Health Activists (ASHA), collect information from households on NCDs in paper formats that are digitized at the sub-centre. ASHAs also mobilize at-risk individuals to subcenters for screening by government staff who refer the screened positive people to higher facilities for diagnosis and treatment. Data at all facilities are fully digitized using E-Health Card application on android/web-based platforms.

Results:

The Govt of HP launched the E-Health Card on 2nd August 2017. As of February 2018, across 12 districts of HP, 2080 ASHAs have collected 40000 individuals’ data using the E-Health Card. The government aims to cover 200,000 individuals by the end of 2018, and the entire 3 million adult population of HP in 5 years. The Health Rise Partners are now engaged in replicating the Health Card in Udaipur (Rajasthan) in collaboration with the district health authorities.

Conclusion:

The preliminary E-Health Card results demonstrate huge potential for a unique public private partnership model in providing innovative and technological support to government’s efforts towards improving NCD prevention & control and thereby combatting emerging NCD epidemics.
Socioeconomic Inequality in Community Based Health Insurance Premium Contribution in Rwanda

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Community based health insurance (CBHI) appears to have mushroomed in many low and middle income countries (LMICs). This is perhaps in response to policymakers calling for low-cost pro-poor health financing, within the various health systems, as a means to achieve universal health coverage (UHC), and therefore achieve sustainable development goals (SDGs). Existing CBHI evaluations have, however, tended to ignore the distributional aspects of the household contributions made to CBHI. One country that has made substantial positive progress in CBHI implementation is Rwanda, having experimented with two types of CBHI within a decade. In this paper, the objective is to investigate the pattern of socioeconomic inequality in CBHI premium contributions (payments) in Rwanda. In addition to this we also assess gender difference in CBHI contribution (payments). The analysis methods uses three econometric approaches; decomposition of the concentration index of inequality, Blinder-Oaxaca mean-based decomposition, and unconditional quantile regression decomposition. The study uses two sets of cross-sectional data for the periods 2010/11 and 2013/14. The key takeaway message from the results is that the categorisation of CBHI premiums into different payment groups, may have led to the CBHI being financed by the richer individuals and reduces regressivity. In both the flat rate system, and the wealth based categorised system, inequality exists but it’s much more pronounced in the flat rate system. By designing a new system based on wealth categorisation, inequality in CBHI payments improved to the advantage of the poor. In terms of gender differences in CBHI payments, female headed households are likely to spend less on CBHI than male headed households. The Blinder-Oaxaca decomposition analysis shows that the difference in CBHI payments is due to group differences in the distribution of individual characteristics between the female-headed households and the male headed households. From the main results, it means that inequality in contribution in a CBHI system based on wealth categories is better than the flat rate system, thereby indicating that CBHI is indeed pro-poor. On gender differences, the implications is that there has to be a gender approach in design of CBHI policy. The lessons for other developing countries is that it is better to design a CBHI system that make people contribute differently basing on their wealth status. Additionally, to ensure health for all, and achieve SDGs, gender issues need to be addressed if CBHI has to be pro-poor.
Eficiencia técnica en la producción de servicios ambulatorios de salud materna en México: un análisis envolvente de datos longitudinales

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Antecedentes. El Sistema Mexicano de Salud experimenta una paradoja: ha expandido notablemente los recursos financieros del sub-sistema público de salud durante los últimos quince años, pero ha producido resultados sub-óptimos en la cobertura de intervenciones esenciales de salud materna dirigidos a su población más pobre. Es clave garantizar la producción eficiente de servicios primarios de salud para que los sistemas de salud de países en desarrollo incrementen sostenidamente la salud de sus poblaciones y cumplan los ODS. Brindamos evidencia original sobre el nivel, evolución, heterogeneidad, y factores estructurales y políticos asociados a la eficiencia técnica (ET) con que las unidades de primer nivel de atención producen servicios de salud materna dirigidos a población mexicana sin seguridad social.

Métodología. Realizamos un análisis longitudinal (2008-2015) de las 243 jurisdicciones sanitarias de México. El producto considerado fue la cobertura de servicios adecuados de salud materna (que implica recibir cuatro o más consultas médicas durante el embarazo y atención médica e institucional del parto). Los insumos de producción incluyeron recursos humanos y de capital. Utilizamos análisis envolvente de datos por ventanas para calcular la ET. Finalmente, estimamos un modelo de regresión múltiple tipo panel para explicar la ET en función de factores contextuales y políticos.

Resultados. La cobertura de atención adecuada de las mujeres mexicanas sin seguridad social se incrementó 22% (p<0.01) en el periodo de estudio. La ET promedio ascendió de 54.3% en 2008 a 62% en 2015 (p<0.001). Además, se observó la reducción en la variabilidad del puntaje de ET estimado. El modelo de regresión múltiple mostró que la ET fue mayor en las jurisdicciones sanitarias con menor marginación social, desigualdad del ingreso y presencia de población indígena.

Discusión/conclusiones. Evidenciamos el incremento significativo de la ET en la producción de servicios primarios de salud materna. Este crecimiento fue heterogéneo, frente al sur y sureste del país, el norte presentó mejor desempeño. La ET fue menor en contexto de mayor marginación social, desigualdad económica, y presencia de población indígena. El gobierno mexicano deberá priorizar la redistribución de recursos materiales y humanos y el fortalecimiento de su gestión con el objeto de garantizar las mismas oportunidades de acceso para toda la población, particularmente aquella residente en regiones de mayor rezago social. Para ello, será clave renovar los criterios de asignación y distribución de recursos, y los mecanismos de control en su uso y de rendición de cuentas.
Cooperación internacional en salud y participación ciudadana: el caso del programa Mais Médicos para Brasil

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INTRODUCCION: El sistema de salud de Brasil es universal y gratuito. Este se encuentra organizado en una red de servicios con apoyo financiero de tres instancias: La Nación, los Estados (provincial) y Municipios. En los municipios existen consejos de salud que son órganos de participación de la sociedad civil y trabajadores. Sus integrantes están atentos a las experiencias de los usuarios por el SUS y movilizan problemas y sugerencias para mejorarlas. En el año 2013 se empezó a recibir médicos, la mayoría cubanos, procedentes de la cooperación internacional en salud. Esto fue parte de un programa llamado “Mais Médicos” que fue creado como respuesta al problema de la falta de médicos para Atención Primaria, especialmente en municipios pobres y remotos. Estos médicos se incorporaron al Programa de Salud de la Familia de un gran número de municipios brasileños.

OBJETIVO: Describir la evaluación del Programa “Mais médicos” por parte de los consejeros municipales de salud de municipios seleccionados durante los años 2015-16.

METODOLOGÍA: Se trató de un estudio de caso descriptivo de corte transversal basado en una metodología cualitativa. Se realizó en primera instancia una muestra simple estratificada de municipios y luego una muestra intencional. Fueron analizadas 58 entrevistas semi dirigidas en base a un análisis lexical. Fue usado el software gratuito IRAMUTEQ para presentar los resultados.

RESULTADOS: Los consejeros de salud se refirieron a cuatro temas diferentes: el funcionamiento del consejo, evaluación del Programa “Mais Médicos”, regionalización y redes de atención de salud y sobre los médicos cubanos del programa.

DISCUSION: Los consejeros reflexionaron sobre el rol de los consejos de salud y sobre el funcionamiento de la Red de servicios. Expresaron que los consejos tienen una modalidad de trabajo burocrática y que continúan siendo un desafío. Ellos expresaron que los médicos cubanos trajeron a sus municipios un nuevo modelo de atención que expresaron como nacionalidad. Atribuyendo a los “cubanos” un hacer diferenciado de los “brasileños”. El relato de los consejeros sobre el modelo de atención en el que se forman los médicos cubanos, incorpora características de humanismo, atributo que no era común entre los médicos locales.

CONCLUSIONES: Los consejeros hicieron una evaluación de su práctica y del sistema de salud donde expresaron desafíos sobre el acceso y transito por la red de servicios. No obstante el programa “Mais Médicos” trajo una mejora en la calidad de atención primaria y especialmente valoraron el componente de humanización de la atención.
How health systems address complexities - a theoretical discussion based on simulation exercise

At the intersection of complexity science and systems thinking a range of questions arises on how systems respond to complexity in its environment and what are the foreseeable outcomes of those responses. In this paper we highlight first the need to be clear about the distinction between complexity and systems. Subsequently we argue that independent from the strategies a system may adopt, systems cannot transform complexity in their environment into simplicity. The elements and relations between them that make an environment complex are not entirely amenable to systems’ intervention. Rather, systems’ interventions may bring additional complexities to their environments. Therefore, we argue that the system itself has to become more complex in order to deal with its complex environment. We construct our argumentation based on the Systems Theory formulated by Niklas Luhrmann. The basis for our discussion is a simulation of an outbreak of a flu epidemic in Switzerland for which the complex network of factors and expected health interventions were comprehensively mapped and used for building a stochastic model of the epidemic profile. The modeling allowed to take into account the complexity of the outbreak as well as the complexities of the interventions the health system would need to implement to contain it. The paper explains the modeling exercise and the complex relations among the array of variables involved. In conclusion, this study seems to corroborate the understanding that the health system itself would need to become more complex to adequately respond to the complexities of an outbreak. This understanding of the relation between complexity and health systems is conceptually consistent and therefore highly relevant for all engaged in projects and programs to strengthen health systems.
Reducing out-of-pocket expenditure through strategic purchasing of private clinics in Yangon, Myanmar

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Background: With chronic under-investment in health, private sector plays a significant role in the provision of healthcare in Myanmar and the level of out-of-pocket spending on health is over 70%. Since March 2017, Population Services International (PSI) Myanmar has been implementing a strategic purchasing pilot in two peri-urban townships of Yangon to demonstrate the capacity of private general practitioners (GPs) in its Sun Quality Health social franchise network to offer a basic package of primary care services to the poor while reducing financial barriers. The research aimed to evaluate whether the out-of-pocket expenditure (OOPE) reduced when they sought health care from these clinics.

Method: We present the evaluation results of baseline and midline of a longitudinal study. The OOPE for seeking health care at various providers for sickness or for family planning reason was measured. The transport cost to and back from the clinic was included in the calculation of OOPE. The satisfactory level after using the clinic was also asked. Paired-T test was used to detect the changes between baseline and midline results.

Results: The OOPE significantly (p<0.001) decreased from MMK 4,655 (USD 3.58, exchange rate 1USD=1,300 MMK) to MMK 1,397 (USD 1.07) for 95 (11%) people who sought health care for sickness at private clinics during baseline and later sought care at strategic purchasing clinics during midline. Whereas the OOPE of 131 (15%) people who sought care at private clinics during both baseline and midline had not changed significantly (MMK 5,145 (USD 3.96) Vs. MMK 5,429 (USD 4.18)). On account of procuring 3-month (family planning) injection, the OOPE decreased significantly (p<0.001) from MMK 1,300 (USD 1) to MMK 831 (USD 0.64) in 68 (15%) women. Whereas, for 188 (43%) women who continued to seek 3-month injections at private clinics during both baseline and midline, the OOPE didn’t change significantly (MMK 1,474 (USD 1.13) vs. MMK 1,490 (USD 1.15)). In contrast, we did not find any significant change in the satisfactory level.

Conclusion: We concluded that by contracting the general practitioners with capitation system, the OOPE for the clients can be reduced without reducing their satisfactory level of the clinic’s services.
Public Policies and Health in the Municipality of Florianópolis: A Documentary Analysis

Lilian Cunha, Federal University of Santa Catarina
Abstract Id: 445

Objective: To analyze Public Policies (PP) of Florianópolis in relation to the insertion of health principles that permeate the approach Health in All Policies – HiAP. Method: The official documents of the municipality were selected and the content analysis was carried out. To relate the policies, six priority strategies for "healthy cities" at the level of municipal governments were defined from the HiAP approach guides: 1. Governance and Leadership: Implementation of actions; 2. Economic development and education; 3. Secure Communities; 4. Residential environments; 5. Environmental health and justice; 6. Quality and access to health centers and social services. The grouping of policies in each strategy was based on the frequency of health principles in each document. Results: 24 PP were selected. With regard to the principles, the most frequent terms in the policies were: Health Promotion; Access to services; Social inclusion; Education and Economic Growth. Intersectoriality, Popular Participation and Mobility are infrequent terms in policy texts. This result corroborates with studies that show among the main problems for the municipality the urban mobility, the territorial planning, the distribution of water, sanitation and drainage. In this way, the importance of public policies in local development and in the transformation of reality is emphasized and for this the city requires fundamental innovative solutions in the legislation in line with the vision "Health for All". That is, from guiding documents to address the inequities managers and political leaders must prioritize by developing public policies that ensure equal opportunities and resources for all people. This includes building healthy environments and emphasizing educational actions. Conclusion: Establishing innovative strategies for managing and directing PP in local government is a major challenge. It is understood that through the Health in All Policies approach, the development of collaborative actions in synergy and articulated from the point of view of the principles, values, objectives and strategies for health improvement and reduction of inequities is expanded.
Jacqueline Cutts, Safe Mothers, Safe Babies  
Abstract Id: 39

**The ACCESS (Accessibility of Essential Surgical Services) study: Applying the Three Delays model to global surgical care in rural Uganda**

Co-authors: Jacqueline Cutts-Safe Mothers, Safe Babies; Richard Cutts-Gundersen Health System; Mukalu Mohamed-Safe Mothers, Safe Babies; Vivian Ho-Safe Mothers, Safe Babies; Ronald Mali-Safe Mothers, Safe Babies

**Background:** Approximately 30% of the global burden of disease is attributable to surgically-treatable conditions. Almost 5 billion people lack access to surgical and anesthesia care, and 25% of people seeking surgical care will face financial catastrophe. Realization of the SDGs necessitates immediate investment in health systems, including surgical capacity. Yet, investment in global surgery is low and data lacking on surgical condition prevalence, barriers to accessing surgical care, and models useful in addressing these conditions.

**Objective:** We sought to develop and cost a replicable method to quantify household-level mortality attributable to surgically-treatable conditions and associated household risk factors, and to assess whether the Three Delays model (originally developed to explain maternal mortality, including delays in care-seeking, accessing care, and receiving care) is a useful method to conceptualize surgically-treatable mortality.

**Methods:** We adapted a Reproductive Age Mortality Study (RAMOS) method in which all households in two rural regions were contacted and asked about household demographics, access to surgical services, and household deaths in the prior 18 months. For any death, we asked about demographics and symptoms of the deceased, and the Three Delays, using a standardized questionnaire administered on Android tablets. We also performed facility assessments in 9 health facilities to better understand access and quality-care issues.

**Results:** We contacted 7,025 households at a cost of $0.35/household contacted. 6.7% of households reported experiencing a death; 65.1% of deaths were surgically-treatable. 38.4% of those deaths were children under 5. Households with a surgically-treatable death were more likely to be female-headed (OR=1.5, p=0.00), be larger (7.7)(t(6,598)=−7.4, p=0.0), and live 2+ hours from a surgically-capable facility (OR=1.46, p=0.0). Among surgically-treatable deaths, 75.7% experienced First Delays, 67.4% Second Delays, and 73.8% Third Delays; 96.6% had 1+ delays and 26.8% all three. 11.2% of surgically-treatable patients sought initial care at an illegal clinic and only 27.2% from a surgically-capable facility. The cost of transport alone was catastrophic (>10% of household income) for 95.7% of cases. The only public facility providing surgical care could not provide all three Bellwether procedures as recommended by the Lancet’s Global Surgery 2030 report.

**Conclusion:** Surgically-treatable conditions are common and incur many of the same delays that maternal deaths incur in LMICs. It is plausible to consider measuring both at the population level, but a tool needs to be validated to ensure accuracy. Investments in global surgical care as a component of health systems strengthening must become a priority to improve survival.
L’utilisation de la recherche au ministère de la Santé au Burkina Faso : le point de vue des décideurs

Cette présentation porte sur les résultats d’une étude menée suite à plusieurs années de recherche au Burkina Faso. Au cours de ces années nous avons déployé des efforts considérables pour favoriser l’utilisation de nos résultats en mettant notamment en place un programme de courtage de connaissances. Ces efforts ont souvent produit des impacts positifs au niveau local et régional, mais on a peu de traces d’une utilisation des résultats au niveau central. En février 2017, le nouveau ministre de la santé, lui-même chercheur, s’est montré ouvert à documenter l’attitude face à la recherche au sein des hautes instances de son Ministère. Nous présenterons la synthèse d’une série d’entretiens menés en mai 2017 auprès de 12 directeurs et de deux conseillers du cabinet du ministre. L’entretien visait à recueillir le point de vue des répondants sur l’utilisation de la recherche pour la prise de décision. Les résultats montrent une attitude mitigée face à la recherche ; même si certains expliquent que la situation évolue, la majorité des répondants considèrent que la recherche influence très faiblement les décisions. On rapporte d’importants obstacles à l’utilisation de la recherche, les plus cités étant les difficultés d’accès (repérer et comprendre les résultats pertinents) et l’absence de pistes d’action pour appliquer les résultats. Un autre obstacle important touche le mode de communication des chercheurs qui utilisent trop souvent un jargon spécialisé difficile d’accès. Par ailleurs, les répondants proposent plusieurs idées pour favoriser l’utilisation de la recherche au sein du Ministère, la principale concerne la coordination et la diffusion des résultats afin de les faire connaître. Mais pour que les décideurs accèdent aux résultats de recherche, il faut les convaincre de ce que la recherche peut apporter de positif et qu’ils ont intérêt à l’utiliser. Plusieurs insistent sur l’importance de développer les capacités des chercheurs pour mieux communiquer leurs résultats. Enfin, nous avons questionné les 14 répondants au sujet de leur propre utilisation de la recherche au sein du Ministère. Près de la moitié des répondants n’ont pas été en mesure de citer une seule étude qui avait servi à prendre une décision ou à influencer la formulation d’une politique. La discussion portera sur une série de pistes de réflexion et d’action en lien avec les plus solides données probantes concernant l’utilisation de la recherche pour la prise de décision politique.
Excess facility-based Caesarean-section rates in Nepal highlights the challenge in harnessing private sector capacity to meet maternal health goals in low-income countries

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Background: In Nepal, 43% of all births are in public and 10% in private facilities with Caesarean sections rates of 12% and 35% respectively. Nepal’s population C-Section rate of 8.6% falls within WHO recommended 5-15%, but appropriateness of observed rates at facility-level is difficult to assess due to differences in case mix. Access to obstetric care is supported through the Government ‘Aama’ programme, which pays enrolled public and private hospitals costs for providing normal and complicated deliveries, with different reimbursement rates for each.

Methods: A two-stage stratified cluster random sampling strategy was adopted to randomly select public and private hospitals, enrolled or not-enrolled in Aama programme. The inclusion criteria were facilities with minimum 500 births per-annum and C-section rate &gt;10%. The study included 4680 births at 29 hospitals, 18 of which were in private facilities and 11 in government. Half of the private facilities and nine government facilities were enrolled in Aama. Facility C-section rates were analysed against WHO’s C-model benchmarks to explore actual versus predicted rates in four categories, government and private, with or without Aama.

Results: In all four categories, the observed C-section rates were higher than the WHO predicted reference rates, with the greater difference noticed in private facilities. C-section rates observed in government with Aama facilities were 22% versus 11% predicted, 36% versus 22% in government non-Aama. In private with Aama facilities the observed rates were 35% versus 17% predicted and 43% versus 23% in non-Aama. In private hospitals with Aama, among women with first pregnancy (full-term single baby cephalic presentation) 22% with spontaneous onset of labour and 76% who had induced or pre-labour underwent a C-section, the highest rates overall for these two groups of women. In public hospitals with Aama these rates were 13% and 68% respectively. These two groups of women contributed to nearly half of all the deliveries and almost 85% of women with a previous C-section had another C-section for their next birth.

Conclusions: The results of this study suggest facility C-sections rates in Nepal are high relative to the WHO reference rate, markedly so in private facilities. Aama and non-Aama. Public-Private Partnership for maternity care aims to reduce mortality and morbidity. However, too high C-section rates subvert this goal and absorb scarce public funds. Strategic purchasing arrangements with the private sector need to be reviewed to ensure they are not incentivising oversupply. C-section rates can be monitored periodically against benchmarks.
Strengthening the referral mechanism in a service delivery network in the Philippines

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Background: A service delivery network (SDN) is a strategic mechanism for expanding access to and strengthening continuum of care for families across political and geographical boundaries. It seeks to ensure continuing provision of quality care by combining capacities of individual health service delivery points into a unified delivery system.

A 2015 baseline assessment of 21 provinces in Luzon, Philippines found written referral arrangements and agreements among service delivery facilities in 20% of sites. This low percentage is concerning because referral systems play a key role in SDN success and ensuring comprehensive coverage. To address the need for a systematic referral system, we developed a technical guide for establishing functioning referral mechanisms within SDNs and evaluated its implementation within pilot settings.

Methods: Qualitative methods were implemented to understand the existing referral mechanisms. Referral guidelines systematically describing the stages of the referral mechanism were developed. Monitoring and evaluation (M&E) tools and indicators were created to determine the functionality and performance of the referral system. The resulting technical guide was piloted in 13 sites (seven provinces/three cities) in Luzon.

Results: The qualitative assessment highlighted the need to create a reference resource to assist frontline healthcare workers with referral decisions, timely referrals, and knowledge of where to send referrals. This information influenced the guide. Through the pilot, 2,101 outgoing referrals were recorded. Health center referrals accounted for 54%, hospitals and private lying-in clinics accounted for 30% and 16%. Of the outgoing referrals, 1,971 included type of referral. Transfers accounted for 65%, and consultations 26%. Of the recorded outgoing referrals, 1,673 included information on referral status, 98% were accepted referrals.

Discussion: Health centers are first-line facilities and have more opportunities to make referrals, so the high proportion was expected. However, there was a surprisingly high proportion of referrals from hospitals. We suspect, this high referral rate is a signal that second-tier hospitals were unable to manage complex illnesses, and referred these cases to third-tier facilities. Strengthening the second-tier facilities in an SDN should be a future focus. The findings suggest the referral system is maturing; in a developed SDN, the proportion of consultation referrals should increase, and transfer referrals decrease, suggesting earlier diagnosis and management of cases.

As uptake of the guide scales, we expect further improvement in patients receiving appropriate and timely care. To ensure sustained momentum, health leaders should continue to prioritize strengthening of the referral mechanism in the SDN and implementing M&E.
Implementation Status and the use of Ambulance Service for Emergency Referral of Maternal and Newborn Care in Ethiopia; A Health Facility Level Assessment

Co-authors: Atkure Defar Deghebo-Ethiopian Public Health Institute

Background: A well-functioning referral system is characterized by an efficient use of transportation and management of resources, and quality clinical management of referred cases. In this study we evaluated the referral transport services for maternal and newborn care in Ethiopian health facilities.

Methods: The study used 2016 Ethiopian EmONC assessment. The survey was a cross-sectional census of public and private health facilities that provided maternal and newborn health services. Data were collected in 3,804 facilities. The analysis was done using STATA 14. Ethical clearance was obtained from IRB of the Ethiopian Public Health Institute.

Results and discussion: Overall, Only 17% of facilities had their own dedicated functioning ambulance (motor vehicle, motorcycle, or tricycle ambulance). Among these, reports of using the ambulance for non-emergency transport were common. Use of the ambulance for transporting clients home was reported by 48% of facilities. District Health Offices provided ambulance services for 62% of health facilities overall, and for 64% of health centres. However, a third of facilities assumed that clients would find referral transportation on their own. Twenty-three percent of facilities had no one person in charge of referral and 26% had written guidelines. Seventy-three percent (61,292 women) with obstetric complications admitted at health centres were referred out to a higher level of care, suggesting the low functioning capability of health centres.

The relation of different information with the presence of ambulance onsite where checked. There is no relation between institutional delivery and availability of ambulance onsite (p=0.14). Hospitals/MCH centres had 3 times (95% CI: 2.13, 4.91) more likely to have ambulance onsite than health centres/specialty clinics and the same for urban located facilities (aOR =2.76, 95% CI: 2.26, 3.38). Availability of ambulance onsite in public facilities and facilities located &gt;50km from the facility providing surgery were found to be very low as compared to their counters (aOR =0.19, 95% CI: 0.11, 3.50) and (aOR =0.35, 95% CI: 0.21, 0.57), respectively.

Conclusions: Very lower percent of health facility in Ethiopia had ambulance onsite. No effect of referral transport service on institutional deliveries was noted. Health facilities that are far from the facility providing surgery should have ambulance and mandatory to interconnected health centres to hospital referrals. However, this needs to be backed up with adequate supply of basic and emergency obstetric care at all facilities.

Key words: Referral, Ambulance, Maternal, Newborn, Ethiopia
Se estudió la viabilidad de hacer Promoción de salud (PS) en un establecimiento privado de atención que posee internación (89 camas), perfil quirúrgico y alta complejidad. Objetivo: Analizar la viabilidad para la PS en usuarios de un servicio privado de atención (SPA) analizando su viabilidad. Objetivos específicos: 1) Realizar el Diagnóstico sobre creencias y necesidades para el cuidado de la salud de la población usuaria del SPA; 2) Determinar el grado de aceptación a actividades de Promoción de la Salud, por parte de los usuarios, profesionales y conducción del servicio; 3) Identificar ejes temáticos sobre los cuales se debería realizar PS.

Material y métodos: estudio de corte transversal y descriptivo. Se realizó encuesta a usuarios, a profesionales y a la conducción del establecimiento. Muestra usuarios: no probabilística de 70 sujetos tipo, o sea personas con una característica en común en los que se exploran opiniones. Muestra profesionales: se seleccionaron 37 profesionales del staff responsables del 50% de egresos. Se encuestó al Presidente del Directorio. Resultados: Muestra de usuarios: sexo 59% femenino- 41% masculino. Edad: 21 a 30 años 30%, 31-40(24%), 41-50 años (24%), 51-60 con 7% y 70 y+1%. Importancia asignada al cuidado de la salud: 41,4% media, 55,7% alta. Interés por aprender sobre cuidado de la salud: 87,1%, alto 11,4% y 1,4% poco o nada respectivamente. Temas de interés: alimentación y sobrepeso (14), diabetes (8), problemas ginecológicos (6), cáncer (4), enfermedades de transmisión sexual (2), problemas prostaticos (1), enfermedades psiquiátricas (1), odontología (1), hipertensión y diabetes (1). Conocimiento de factores de riesgo propios: 94,3% conocían peso, 74,3% conocía su TA, 74,3% su colesterolemia, 61,7% su glucemia. Conductas preventivas de autocuidado: vacunación antigripal 31% vacunados, exámenes prostaticos cumplidos según norma 24%, PAP según normas en los últimos 2 años 60,98% de mujeres, 12,20% no lo hicieron nunca. 26% fuma, 93% consume habitualmente carnes rojas, 51% mayonesas o manteca, 2,9% consume alcohol, 75% predisposición al sedentarismo. Se encuestaron 37 profesionales: 73% opinó favorablemente (10 dudosos) sobre hacer PS, 54% lo harían en la práctica de su consultorio profesional, 45,9% dudosos. La entrevista a la conducción reveló su predisposición favorable, con reservas por los costos de la misma, los que no serían recuperados, para hacer PS en el establecimiento. Conclusões: Los usuarios están dispuestos a participar de educación para la salud. La conducción y cuerpo profesional representativo revelan predisposición positiva, pero no seguridad, a la realización de PS. La actividad sería educativa y con medidas institucionales. La no recuperación de costos es un factor negativo para esta práctica.
Stimulating Community action for inclusive UHC: A case study of community based organisation for reaching health to Manual Scavengers the most marginalized community in India

Co-authors: Surekha Dhaleta-Centre for Health and Social Justice (CHSJ); K B Obalesh -THAMATE

Background: Social exclusion of the marginalised communities obstructs the realization of the principle of ‘Health for all’ as envisioned by the Alma Ata Declaration and as envisaged in the tenets of Universal Health Coverage which are central to the SDGs principles of leaving no one behind. Social determinants of health have compounded effects for Manual Scavengers (MS) who are subsumed under layers of social hierarchy, caste in India, face extreme forms of discrimination, untouchability, systemic deprivation and lack both voice and power. The manifestations of caste discrimination are visible as limited access to health services, challenges in negotiating with health service providers, in seeking accountability and responsiveness of health systems. This paper analyses diverse strategies employed by THAMATE, a community based organization led by persons from the disadvantaged MS community in Karnataka (India) to enhance their right to entitlement and dignity (inclusive of health)campaign, against structural, systemic barriers rooted in historical backdrop of exclusion, discrimination and vulnerability.

Methods: A case study was done over period of one year to understand the trajectory of over a decade of THAMATE’s work, which has attempted to foster the bottom up approach and grassroots mobilization for marginalized voices of manual scavengers. The methods involved document analysis, interviews with key informants and leaders of the CBO and group discussions with MS community members.

Results: THAMATE engaged a larger social determinants and a multi-sectoral approach along with a vigorous mobilization of the MS community to address issues of health care and denials faced by the MS community. It discerned that locating the base in grassroots mobilization it used building leadership, fact-finding, networking, legal intervention, RTIs, media advocacy, documentation/research and evidence building, methods of ICT, photovotes, public health dialogues, public demonstrations as multiple strategies in demanding health rights and making health system responsive and community -centric and advocating with health service providers also.

Discussion: Health systems, like other systems, display unaccountability to and practices exclusion of MS in diverse ways. Insights gained in the study suggest MS community see health as inclusive of and as embedded in the multiple axes of discrimination and systemic oppressions they counter. The case study points to awareness of entitlements, concerted collective mobilization, multiple-integrated strategies along with the agency of a committed CBO as key factors in enhancing the power of the community to demand HS accountability for reaching out to the most marginalized for inclusive vision of UHC.
Using mixed-methods research to assess the role and effectiveness of private sector drug shop products and services in Tanzania

Background

As a major source of care, particularly for rural residents, Tanzania’s government recognized the importance of engaging retail drug shops to improve their pharmaceutical product and service quality. Its accredited drug dispensing outlet (ADDO) program allows shops to sell selected prescription-only medicines if they meet certain requirements; national scale-up has produced 12,000+ accredited shops, and other countries have adapted the model to improve private sector services.

Methods

Our quantitative and qualitative methods to assess ADDOs’ contribution to community access to and use of medicines included audits of dispensing records and product price and availability at 86 ADDOs and 13 pharmacies; scripted mystery shopper visits at 306 ADDOs; structured interviews with health providers and exiting patients at 98 health facilities, 43 government representatives, and 84 ADDO personnel; 1200 household surveys; and quality testing of 242 drug samples from retail outlets using internationally recognized methods.

Results and discussion/conclusions

Almost all (92.6%) of the 242 samples of nine products tested met quality standards; the failures were primarily ergometrine, which requires cold storage. Of 614 household members with a recent acute illness, 73% sought outside care—30% at a public facility and 31% at an ADDO. However, people bought medicines more often at ADDOs no matter where they first sought treatment advice. Although health facilities and ADDOs had similar antimicrobial availability, ADDOs had more pediatric formulations available (p<0.001), and the difference in the median cost to patients to treat pneumonia was relatively minimal (US$0.26, public facility vs. US$0.30, ADDO). ADDO dispensers are trained to initiate antibiotic treatment then refer complicated cases to a health facility, and 99% of mystery shoppers presenting a child pneumonia scenario received an antimicrobial (54%), a referral (90%), or both (45%), which are recommended practices. However, one-third of ADDO dispensers needlessly sold antibiotics for cold symptoms, and 85% sold an antibiotic on request. Dispensers could explain treatment guidelines for acute respiratory infection and diarrhea, and almost all knew that unnecessary antibiotic use contributed to antimicrobial resistance. However, they reported that their dispensing is driven by customer demand, habit, and filling inappropriate health facility prescriptions. ADDOs are the principal source of medicines in Tanzania and an important part of a multifaceted health care system that now recognizes ADDO dispensers as a new class of healthcare worker. Although accreditation addresses quality in private drug shops, effectively improving appropriate medicine use also needs to target health facility prescribers and the public.
How does conflict affect health vulnerability? Evidence from three post-conflict countries

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Background: We explore how conflict appears to have shaped household structure and affected health vulnerability in three post-conflict countries: Cambodia, Sierra Leone and (Northern) Uganda. Using recent census data and two household surveys (Living standards and Demographic and Health Surveys) we examine how historic conflicts still impact on household structures today. We then investigate how these structures may contribute to household vulnerability through two mechanisms: 1) by affecting livelihoods and access to resources and 2) by contributing to greater need for services through higher levels of dependency and age-related ill health.

Methods: Data from recent Census, DHS and living standards survey are analysed in two ways. Firstly, by examining disaggregated population structures and their links to periods of conflict. Second, through multivariate structural equation modelling that allows an understanding of the simultaneous impact of household structure (household headship, dependency ratio, levels of disability) on household living standards, health needs and use of services and the knock-on impact on health care spending.

Results: The effect of conflict on household structures are long-lasting. In Cambodia, for example the households formed during the conflict period (1970s) are much more likely to be headed by a woman. In Uganda, individuals in households that are both conflict affected and female headed have higher levels of sickness and catastrophic health spending. In Sierra Leone, we find that households with conflict affected structures are associated with substantially higher numbers of visits to health facilities, lower per capita income and an increased probability of catastrophic health spending.

Discussion: The results demonstrate that the long-term effect of conflict on households continue for many decades after the end of hostilities. These effects continue to present challenges for the health system in extending universal coverage. Conflict affected households are often concentrated in areas of the country and outside the regular workforce. Those households affected may require specific targeting to ensure health services are accessible and affordable.
Public Hospital Self-Management in Argentina, and the Ability to Improve Quality and Outcomes. A Stakeholders’ Perspective

Co-authors: NATALIA ESPINOLA-CENTRO DE ESTUDIOS DE ESTADO Y SOCIEDAD; DANIEL MACEIRA-CENTRO DE ESTUDIOS DE ESTADO Y SOCIEDAD

Background: About two decades ago, Argentina initiated a process of reforming its federal health care system, being hospital self-management one of its key instruments. A general normative model—adjusted to local characteristics by each province—aimed to provide greater flexibility and autonomy to public hospitals' managers in the allocation of resources, looking for adapting hospital services to low-income population needs, as well as allowing better working conditions for personnel. Different hospital directors have different abilities to recognize their scope of responsibilities, and to apply the new rules in the decision-making process, subject to idiosyncratic and structural factors at the provincial level, such as available staff of human resources, infrastructure, and geographic location. Therefore, different management approaches may impact differently on the behavior of health professionals, beyond salary, which affect hospitals results. Objective: Based on perceptions of policy-makers and physicians, and administrative data, the goal is to analyze the interactions between normative transfer of responsibilities, hospital directors’ management capacity, and health professionals’ behavioral responses; and its effects on hospital productivity and personnel’s level of conflict. Methods: A qualitative-quantitative study based on semi-structured in-depth interviews to public directors of 15 hospitals in five Argentine provinces was performed, and a multiple choice surveys conducted on a sample of 615 doctors in the same hospitals, was combined with administrative information about production and resources in each institution. Scope of responsibilities, challenges and sources of conflict according to hospital directors were combined with personnel’s levels of satisfaction. Based on the information collected, different indicators to measure the relationship between the variables of interest were developed. Results: Hospital management capabilities are relatively different across jurisdictions, and even between institutions within the same province, under the same regulatory frameworks. Directors agree about limited autonomy in personnel management, with differences across normative models. These results are correlated to the health professionals’ perceptions about on-the-job satisfaction, career growth, professional recognition, motivation and work load, which also varies by institution based on age and gender perspectives. Conclusion: Management capacity gaps and their responses show the need to provide a deeper view to implementation effects of health reforms, their challenges and effects in public self-management hospitals.

Keywords: models of hospital management - human resources - decision-making – Latin America
Has Indonesia’s national health insurance scheme reached those most in need? Analysis of hospital benefits and healthcare utilization

Co-authors: Thomas Fagan-Palladium; Lyubov Teplitskaya-Palladium; Arin Dutta-Palladium; Prastuti Soewondo-Indonesia National Team for the Acceleration of Poverty Reduction (TNP2K); Dhanie Nugroho-Palladium

Background: Launched in 2014, Indonesia’s national health insurance scheme, Jaminan Kesehatan Nasional (JKN) aims to improve access to healthcare services for the poor and otherwise marginalized who have historically experienced lower utilization of public services. To understand whether JKN has improved the equity of public health expenditure, the USAID-funded HP+ project analyzed trends in service utilization and benefit incidence of JKN hospital expenditure across geographic and socioeconomic subgroups before and since JKN.

Methods: We used data on JKN hospital expenditure (accounting for 79% of total JKN expenditure) from the payer agency and analyzed caseload data for inpatient and outpatient hospital services aggregated by five island groups to understand total and per-case expenditure by geography. We used nationally-representative data on inpatient and outpatient healthcare utilization to calculate the relative utilization of services across socioeconomic groups, by island group, and matched this with the per-case expenditure to calculate total benefit by socioeconomic group. We also conducted separate statistical analysis of healthcare utilization trends before and after JKN (2011–2016) and logistic regression analysis to understand the determinants of healthcare utilization.

Results: Access to healthcare has improved nationwide since JKN; inpatient utilization increased at the greatest rate (92%) for poor JKN-insured members from 2013–2016. Results indicate that differences in inpatient utilization by island group and by socioeconomic status have narrowed, although differences in outpatient utilization remain. Most JKN hospital expenditure was skewed toward wealthier populations and specific, predominantly more urban, geographic areas. In 2016, the top wealth quintile accounted for a share of hospital expenditure two-thirds higher than its share of the population, while those living below the poverty line received only half the expenditure expected based on their population share. Geographically, Eastern Indonesia, which is poorer, more remote, and more rural, accounted for a share of benefits equal to just 51% of its population share in 2016.

Conclusions: Despite some improvements in healthcare utilization since JKN, the distribution of JKN expenditure has not aligned with the scheme’s objective of promoting equity in healthcare access. While JKN may have alleviated some demand-side barriers to access there appears to still be a need to improve health-seeking behaviors and strengthen supply-side factors, such as human resources for health and hospital facilities. Indonesia’s JKN scheme must address these other barriers to fully realize social protection of its most vulnerable and geographically marginalized groups.
Strengthening accountability, responsiveness, and financing of Guatemala’s health system through decentralization

Co-authors: Thomas Fagan-Palladium; Ricardo Valladares-Palladium; Albertico Orrego-Palladium; Jose Eduardo Silva-RTI International; Gary Bland-RTI International

Purpose: In recent years, severe underfunding and poor rates of budget execution in the health sector, coupled with the cancellation of the Extension of Coverage Program targeted at improving health access in rural areas, have left many Guatemalans without access to adequate and affordable health services. In response, the Guatemalan government has adopted decentralization as a central pillar of its health sector reform strategy to strengthen mobilization of and accountability for health financing at the local level.

Focus: The USAID-funded Health Policy Plus (HP+) project has supported these efforts by analysing local financial, legal, and operational environments and how they can be leveraged to ensure decentralization translates to improved provision of health services. We found that a complex and sometimes contradictory legal framework governing the use of funds transferred to municipalities and a lack of local capacity to implement them has inhibited investments in health. Giving greater budgetary latitude to municipalities could create US$8 million in new health funding from 2017-2026. At the same time, a series of HP+-supported municipal pilot programs have been launched to strengthen local capacity to plan and track the execution of municipal resources. These efforts will link with the creation of a new public health watchdog, which will be responsible for ensuring that health financing is transparent and accountable. Greater municipal and civil society participation in public expenditure, particularly health expenditure, ensures that funding is better aligned with the needs of local communities and accountable to the populations served.

Significance for the Sub-theme: HP+’s work on decentralization in Guatemala highlights the types of reforms to health governance—particularly to the regulatory environment, municipal oversight, and civil society engagement—needed to ensure sufficient, consistent, and accountable health financing at the local level. By moving the planning, budgeting, execution, and tracking of funds for health closer to the communities they benefit, countries facing resource constraints can maximize the impact of their investments in health. HP+’s experience in Guatemala provides a clear example of the multi-faceted approach necessary to achieve this and the suite of legal, financial, and operational analyses that can be applied.

Target Audience: This topic reinforces the idea of health services as people- or community-centered. It is of relevance not only to policymakers at the local and national level seeking to implement decentralization, but also to communities—and users of health services—to ensure that public funding and services are responsive to their needs.
La evaluación de la calidad de servicios con internación psiquiátrica como herramienta para la reducción de las desigualdades: estudio cualitativo en cuatro provincias argentinas.

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La evaluación de servicios de salud constituye una herramienta fundamental para la reducción de las desigualdades en el acceso a la atención; favoreciendo así el fortalecimiento de las transformaciones de los servicios y, en consecuencia, de los sistemas de salud. En las últimas décadas, distintos autores han destacado la necesidad de incluir en ella la perspectiva de los distintos actores involucrados. Lo anterior cobra especial importancia en los servicios de salud mental, ya que los usuarios de éstos últimos son personas sobre las que históricamente ha recaído el estigma y la discriminación. De modo que -además de permitir identificar fortalezas y debilidades, otorgando mayor racionalidad a la toma de decisiones- la evaluación de servicios de salud mental es una oportunidad para que los reclamos, preocupaciones y cuestionamiento de los grupos con menor poder, se evidencien. Con base en lo anterior, se llevó a cabo un estudio cualitativo en cuatro provincias argentinas, financiado por la Dirección de Investigación para la Salud, del Ministerio de Salud de la Nación, que tuvo por objetivo evaluar la calidad en la atención en servicios con internación psiquiátrica en hospitales generales desde la perspectiva de los responsables, trabajadores y usuarios. Se realizaron 41 entrevistas semi estructuradas en total. Las muestras fueron seleccionadas intencionalmente por criterios, incluyendo a los responsables de los servicios (4), a todos los trabajadores de los mismos (15) y a los usuarios que fueran internados a partir del 1 de julio del 2017 (22). Los datos fueron analizados cualitativamente, con base en dos categorías: orientación comunitaria y respeto y salvaguarda de derechos. Entre los resultados se destaca el desconocimiento de los usuarios sobre sus derechos, las decisiones anticipadas y las asociaciones de usuarios. Como contraparte se ha encontrado una baja utilización del consentimiento informado escrito por parte de los equipos de salud.
Anam Feroz, Aga Khan University Community Health Sciences Department

Abstract Id: 57

**Feasibility of mHealth intervention to improve uptake of antenatal and postnatal care services in peri-urban areas of Karachi: a qualitative exploratory study**

Co-authors: Anam Feroz-Aga Khan University Community Health Sciences Department; Narjis Rizvi-Aga Khan University Community Health Sciences Department; Saleem Sayani-Aga Khan Development Network eHealth Resource Centre; Sarah Saleem-Aga Khan University Community Health Sciences Department

Background: In Pakistan, poor antenatal and postnatal coverage, has accounted for nearly 70% of preventable maternal deaths. Interventions implemented to improve uptake of antenatal and postnatal care services have not shown significant improvements. Recent increase in cellphone penetration has brought forward mHealth as a potential strategy to enhance antenatal care and postnatal care uptake. The objective of this study was to explore if mHealth technology is a feasible strategy to improve uptake of preventive maternal healthcare services in peri-urban areas of Karachi.

Methods: The study employed an exploratory qualitative research design using focus group discussions and key-informant interviews. Focus group discussions were conducted with pregnant women, women in the postnatal period and lady health workers whereas key-informant interviews were conducted with maternal neonatal and child health experts and mHealth experts. The study data was analyzed using NVivo version 11.

Results: This research found that women, healthcare providers and technology experts consider mHealth strategy has high potential to address barriers related to provision and utilization of antenatal care and postnatal care services. Healthcare providers and women understand the term mHealth and knew the benefits of mHealth services. Few of the women and healthcare providers are currently using mHealth for providing and receiving antenatal care and postnatal care services. Women and healthcare provider seemed ready for mHealth use however expressed challenges such as, illiteracy, cultural restrictions, lack of trustworthiness and misuse of technology.

Conclusion: This study informs that mHealth is operationally feasible, culturally acceptable and technologically appropriate strategy. For successful integration of mHealth technology in to existing maternal neonatal and child health care delivery structure, it is considered imperative to build a sustainable model of mHealth by involving government, local communities, telecommunication personnel, health care providers and mHealth and maternal neonatal and child health experts and through tailoring the design of the mHealth solutions in such a way that it benefits majorities of women.
Jhiedon Florentino, Health Policy Development Program (HPDP)

Abstract Id: 347

Beyond free medical care: Why TB patients seeking treatment in NTP facilities still face catastrophic expenses in the Philippines

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Families affected with tuberculosis face various costs related to seeking and receiving health care. This may include medical items such as medicine and consultation fees, and non-medical costs such as transportation and food expenses. Furthermore, they may also lose income due to the inability to work of either the patient or the family member. Overall, these costs may be significant given the long health-seeking and treatment period for tuberculosis and may create access and adherence barriers which ultimately affect health outcomes and increase risk of transmission. Recognizing this, one of the Sustainable Development Goals is to have zero TB-affected households facing catastrophic costs due to TB by 2030.

The National Tuberculosis Program conducted a baseline survey in 2017 to determine the proportion of TB-affected families facing costs considered to be "catastrophic" (or costs exceeding a certain threshold of annual family income). The survey covered 1,880 patients from more than 188 health facilities and is based on a standardized methodology developed by WHO. The study aimed to have a measure for three subdomains, namely: (a) drug sensitive (DS) in rural facilities, (b) DS in urban facilities, and (c) drug resistant (DR) patients.

Results show that thirty five percent of TB-affected families face catastrophic expense, that is, they incur cost more than 20 percent of their annual family income. The proportion facing catastrophic expense is largest among DR patients at 88 percent, followed by rural DS patients at 38 percent, and urban DS patients at 24 percent respectively.

Among those facing catastrophic expense, direct medical expense accounts for very little on the cost faced by patients. Interestingly, the major cost items are on non-medical expenses such as transportation and food during consultation and income loss. The share of non-medical items was observed to be high among the DR (45 percent) and rural DS (32 percent) patients. Income loss accounted for at least 35 percent of total costs. Another finding is the considerable share of food and nutritional supplements on total cost (>15 percent).

Based on the results, the program might need to consider the application of a shorter TB regimen for DR patients to reduce transportation cost and the loss of working days due to TB. Also, moving beyond the traditional facility-based DOTS treatment towards community-based treatment strategies may be explored as a way to minimize transportation expense for all TB patients, improve adherence, and treatment outcomes.
Implications of Fertility Desires on Medication Adherence and the Contraceptive Practices of Women Living with HIV in Cameroon

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Background

With the rapid expansion of antiretroviral therapy (ART) and Prevention of Mother-to–Child-Transmission (PMTCT) of HIV programs in sub-Saharan Africa and Cameroon in particular, women living with HIV are desiring children to meet up with personal and societal expectations. Evidence on the extent and drivers of these desires is scanty. This study therefore, explores the extent and drivers of fertility desires and provides in-depth understanding on the contraceptive preferences and practices of women living with HIV in Cameroon.

Methods

A qualitative research approach through a combination of 4 focus group discussions (FGDs) and 29 in-depth interviews (IDIs) was used. Sampling was purposive and primary research subjects were HIV-infected women of reproductive age currently attending care in four facilities in the South West Region of Cameroon. The Thematic framework approach was used for data analysis and interpretation.

Results

Participants’ narratives indicate that, a complex mix of personal (beliefs and motivation), medical (ART effectiveness) and societal factors (social validation and expectations) appear to influence the fertility desires of Cameroonian women living with HIV. Procreation in this sub-population is seen as a means for women living with HIV to normalize their social status, rebrand their identities and secure their marriages. We also found that desires for pregnancy are not moderated with family planning as majority of study-subjects reported the use of traditional and less effective methods like salt and whisky for family planning. The use of modern contraceptive methods among a minority of study subjects was influenced by myths, perceived side effects, ease and frequency of use.

Conclusion

Our findings suggest that for the sustained engagement of women of reproductive age in HIV care, the Ministry of Public Health in Cameroon needs to employ a comprehensive approach to PMTCT and target all prongs to ensure that every pregnancy is planned and timed to optimize maternal and infant health and to reduce the risk of HIV infection to uninfected partners. Interventions should aim to integrate preconception counselling and family planning into HIV care services and reduce the operational barriers of accessing Family planning commodities.
Tobacco use, awareness and cessation among Malayali tribes, Yelagiri Hills, Tamil nadu, India.

Co-authors: Delfin Lovelina Francis - Dr MGR Medical University

BACKGROUND:

Health is a state of complete wellbeing free from any discomfort and pain. Despite remarkable world-wide progress in the field of diagnostic, curative and preventive medicine, still there are large populations of people living in isolation in natural and unpolluted surroundings far away from civilisation, maintaining their traditional values, customs, beliefs and myths. India has the second largest tribal population of the world next to the African countries. About half of the world’s autochthonous people live in India, thus making India home to many tribes which have an interesting and varied history of origins, customs and social practices. The present study was conducted to assess the tobacco use, awareness and its effect on health among Malayali tribes, Yelagiri Hills, Tamil nadu, India.

METHODOLOGY

The inhabitants of the 14 villages of the Yelagiri hills, who have completed 18years and residing for more than 15years present on the day of examination and who were willing to participate in the study were included.

Data was collected from a cross-sectional survey, using a Survey Proforma, clinical examination and a pre-tested questionnaire which included Demographic data, tobacco habits. An intra-oral examination was carried out by a single examiner to assess the Oral Health Status using WHO Oral Health Surveys – Basic Methods Proforma (1997). SPSS version 15 was used for statistical analysis.

RESULTS

Results showed that among 660 study population, 381 (57.7%) had no formal education. Among the study population 75% had the habit of alcohol consumption. Of those who had the habit of smoking, 26% smoked beedi, 10.9% smoked cigarette, 65% chewed raw tobacco, 18% chewed Hans and 28% had a combination of smoking and smokeless tobacco usage. The reason for practicing these habits were as a measure to combat the cold, relieving stress and body pain after work, and the lack of awareness of the hazards of the materials used. Prevalence of oral mucosal lesions in the study population was due to tobacco usage and alcohol consumption and lack of awareness regarding the deleterious effects of the products used.

CONCLUSION

From the results of this study it may be concluded that the Malayali tribes were characterized by a lack of awareness about oral health, deep rooted dental beliefs, high prevalence of tobacco use and limited access to health services. The health systems are to be strengthened in such areas to achieve the goal "Health for all".
Poster Abstracts

Nancy Fullman, Institute for Health Metrics and Evaluation
Abstract Id: 1346

Multisectoral action for the health-related SDGs: measuring national and subnational progress and projected attainment with the Global Burden of Disease Study 2017

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Background: By adopting the Sustainable Development Goals (SDGs) in 2015, the UN established a much broader, far-reaching development agenda for the world to achieve by 2030. Beyond SDG3, which explicitly focuses on health, 23 SDG indicators within 10 other SDG goals encompass important dimensions of improving population health. To understand where multisectoral action could have the largest impact, we leverage results from the Global Burden of Disease Study 2017 (GBD 2017) and assess the magnitude by which countries and selected subnational locations must accelerate gains to meet currently defined SDG targets.

Methods: Using results produced through GBD 2017, we measured 39 health-related indicators from 1990 to 2017 for at the country-level and for a subset of countries, at the subnational level. On the basis of past trends, we produced projections of indicator values through 2030, using a weighted average of the indicator and location-specific annualised rates of change from 1990 to 2017 with weights for each annual rate of change based on out-of-sample validity. Of the SDG indicators assessed, 25 had defined SDG targets, against which we estimated current trajectories for attainment and the rates of progress required to reach these targets.

Results: On the basis of past trends, many countries are better positioned to meet health-related SDG targets that fall more distinctly within the health sector than those demanding of greater multisectoral action. This is most evident for childhood overweight, road injury mortality, and violence indicators, as well as ambitions to reach universal access to improved water, sanitation, and handwashing facilities. Even among the highest-income countries, reductions in road injury mortality and childhood overweight must be accelerated by at least 2- and 3-fold, respectively, to meet corresponding SDG targets. Across the development spectrum, SDG ambition of eliminating various forms of violence are particular precarious, emphasizing an urgent need for multisectoral collaboration and intervention to bring the health-related SDGs within reach of all populations.

Discussion: Grounding calls for multisectoral action in routinely updated and collaboratively-produced health estimates may help push this crucial work from aspiration to reality. The window to effectively initiate and leverage multisectoral initiatives is narrow, as the early stages of SDG implementation increasingly come to a close. To deliver on the SDG aim of ensuring healthy lives for all, national and international agencies alike need to look across sectors and harness effective strategies to tackle some of the world’s most complex health challenges.
Cost-benefit analysis in a new proficiency testing schemes for the acid-fast smear’s external quality assessment in Chile

The clinical laboratory’s support is important for the Health Systems proper functioning. All results must be reliable, and in order to achieve this it is necessary to provide an External Quality Assessment (EQA) scheme which can guarantee these characteristics. An example of this is the tuberculosis diagnostic which is made through Acid-Fast Bacilli (AFB) smear. In Chile, the diagnosis is standardised by the National Tuberculosis Control Programme (NTCP), and so the EQA for AFB smears. The EQA schemes data since 1973 and its primarily objective has been the confirmation of positive cases which leads to a great expenditure in man-hours (MH) dedicated to this evaluation.

The objective of this study was to determinate the MH of the new methods of evaluation of the EQA scheme for AFB smears to the Chilean laboratories. For this, the sampling for negative smears was used through a hypergeometric distribution. For the positive smears, it was decided to evaluate all of them due to the low incidence of our country. The participating laboratories were divided into two groups, one with 4 annual evaluations and the other with 1 annual evaluation.

For the year 2016 of a total of 372 evaluations and with a participation of 90.5%, 6,050 smears were analysed, which meant the use of 4,730 MH per year at a cost of USD $ 49,210. In 2017, out of a total of 169 evaluations and with a participation of 93.5%, 3,615 smears were analysed, which meant the use of 1,408 MH per year at a cost of USD 17,775. Compared with 2016, the numbers of evaluations were reduced by 53.1% with the reduction of 40.2% of smears evaluated. This meant a time benefit of 20% which, in turn, means a 70.2% decrease in MH. Considering that the initial investment for the implementation of the computer system was 135 MH and the tests carried out for 44 MH (total of 179 MH) the expenditure associated with this investment was USD $ 2,623, that means a reduction of 64% was achieved (USD $ 31,435).

With these modifications, not only the efficiency of the resources obtained were able to be redistributed in the reference areas of our laboratory, but also the performance evaluations of the country’s laboratories could be strengthened.
Mobility, marginality and maternal health: perspectives from semi-nomadic shepherd women in Maharashtra, India

Co-authors: Gayatri Ganesh-Anthra; Nitya Ghotge-Anthra

Background

The Dhangars are a semi-nomadic shepherding community who migrate across the grasslands of India’s Deccan Plateau in Maharashtra state. They travel with sheep and goats in search of grazing pastures, and derive their livelihood from the sale or exchange of livestock for cash or other commodities. They are an economically and ecologically significant people who make use of land unsuitable for agriculture. Their regular migration through remote areas, however, poses challenges for women during pregnancy and childbirth. This is the first study to examine the views, practices and challenges of Dhangar women and men in relation to reproductive and maternal health practices.

Methods

We conducted ethnographic fieldwork and qualitative interviews with Dhangar women (n=6) 18-44 years old who discussed 14 pregnancy experiences, male members (n=6), women over 45 years (n=6) and four group discussions with young and older women (n=16). We used ‘life story’ (Ginsburg 1987) and applied inductive analysis to code qualitative data into categories and themes that were iteratively developed and not defined a priori.

Results and discussion

Official census figures do not exist for Dhangar populations, consequently obscuring the socially structured predicaments of maternal health for pastoral communities. Dhangar women must reconcile the conflicting responsibilities of mobile livelihoods with the requirements of immobile health services targeted to sedentary populations. Stigma against migrants, gender inequality, and the impracticality of leaving children and animals unattended exacerbate the challenges Dhangar women face. Dhangar women value health care during the antenatal period but lack a continuity of care due to constant migration. Most women give birth in the fields, often alone, but no records exist of maternal and neonatal mortality and morbidity. We document their experiences of childbirth and overall, we question how policy initiatives might better address interlocked forms of mobility and marginality in pastoral women’s lives.

Conclusion

A lack of enumeration of Dhangar communities obscures the scale of their challenges. Ecologically and economically, pastoralism can only survive with mobility; and in grassland landscapes pastoralism is one of the best land-use options. Hidden from view, the issues facing the Dhangars intersect on multiple dimensions: economic, environmental, cultural, and social. We are exploring a one-health approach that recognises connections between humans, animals and ecosystems. We believe there is an artificial separation of livestock and human medical care. To integrate the two, Dhangar women will participate in programmes that borrow from the One Health model.
Early changes in intervention coverage and mortality rates following the implementation of an integrated health system intervention in Madagascar: a cohort study

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Background: The Sustainable Development Goals framed an unprecedented commitment to achieve global convergence in child and maternal mortality rates through 2030. To meet those targets, essential health services must be scaled via integration with strengthened health systems. This is especially urgent in Madagascar, the country with the lowest level of financing for health in the world. However, limited evidence exists on the process and population impact of local health system strengthening (HSS). Here, we present an interim evaluation of the first two-years of a district-level HSS initiative in rural Madagascar, using estimates of intervention coverage and mortality rates from a district-wide longitudinal cohort.

Methods: We carried out a district representative household survey at baseline of the HSS intervention in over 1500 households in Ifanadiana District of Madagascar - a remote region of southeastern Madagascar. The first follow-up was after the first two years of the initiative in the same households. For each survey, we estimated MNCH coverage, health care inequalities and child mortality rates both in the initial intervention catchment area and in the rest of the district. We evaluated changes between the two areas through difference-in-differences analyses. Trends in coverage inequalities were assessed through wealth-specific averages and composite indices. To support survey estimates of coverage, annual changes in per capita utilization rates were estimated from all 13 public health centers in Ifanadiana from 2013 to 2016.

Findings: The intervention was associated with decreases of 19.1% in under-five mortality (from 104.1 to 84.2 per 1000) and 36.4% in neonatal mortality (from 47.3 to 30.1 per 1000). We found a 21% reduced risk of incident mortality in children under five as compared to the rest of the district. The composite coverage index (a summary measure of MNCH coverage) increased by 30.1%, with a notable 63% relative increase in deliveries in health facilities. Improvements in coverage were substantially larger in the initial HSS catchment area and led to an overall reduction in health care inequalities. Health center utilization rates in the catchment area tripled for most types of care during the study period.

Conclusions: At the earliest stages of an HSS intervention, the rapid improvements observed for Ifanadiana District add to preliminary evidence supporting the untapped and poorly understood potential of integrated HSS interventions on population health. Fast drops in mortality rates were observed in the absence of rapid macro-economic growth or major national health reforms, which have confounded other studies.
What are the health needs of mobile populations in East Africa? The case of long distance truck drivers in East Africa

Co-authors: Sophie Faye - Abt Associates, Heather Cogswell - Abt Associates; Agnes Gatome - Abt Associates

Background: Landlocked countries Burundi, Rwanda, Uganda, South Sudan of the East Africa Community (EAC) rely on the trucking industry through Kenya and Tanzania for imports and exports. Long distance truck drivers (LDTD) spend long periods on the road and away from home, which tends to come with certain health risks such as abuse of alcohol and other stimulants, and high risk sexual activity. This study sought to understand LDTD’s mobility characteristics, healthcare needs and means for paying for healthcare while on work related travel, and ability and willingness to pay for a portable health insurance product that would cover health expenses across all EAC countries during work travel.

Methods: USAID funded Cross-Border Health Integrated Partnerships Project conducted 361 LDTD interviews, as part of a larger study, between November 2016 and February 2017 from three cross-border areas: Malaba Kenya-Malaba Uganda, Holili Tanzania-Taveta Kenya, and Gatuna Rwanda-Katuna Uganda. LDTD were recruited while in transit at cross-border towns. Data was analyzed with STATA to generate descriptive statistics and multivariate models were used to estimate the impact of various individual level factors on ability and willingness to pay for portable health insurance.

Results: LDTD reported 20-30 work related trips in the past year with a median duration of one to two weeks. 19.1% reported using a health facility while on their most recent work trip of whom half reported expenses outside their home country. 85.5% of LDTD reported paying out-of-pocket (OOP) for health expenses incurred during work travel. OOP expenses were as high as 40% of monthly income. 42.4% of respondents reported owning health insurance but only 16.3% with health insurance reported it could be used beyond their home country. 75% of respondents agreed portable health insurance was relevant to their health needs. Average household income varied between USD 120-415 across cross-border areas. 54.9% of respondents stated they were willing to pay USD 9.2 (2.6% of the lowest monthly income reported) quarterly for portable health benefits of whom 52% agreed they were willing to pay a higher price of USD 11.5 (3.2% of the lowest monthly income reported).

Discussion: These results demonstrate that LDTD are highly mobile, require access to health services outside their home country, face high OOP costs, and are currently underserved with portable health insurance. As next steps, the results will be disseminated to public and private insurers within the region to inform design of portable health insurance for mobile populations.
Comparing standard measures of assessing quality of care in family planning with the use of the standardised mystery client method

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Background This study was undertaken as part of the assessment of the quality of family planning services at different levels of service delivery across Bihar by the Monitoring Learning and Evaluation (MLE) component of the BMGF supported Bihar Technical Support Program (BTSP). In Bihar, the status of the quality of discrete components of family planning services is largely undocumented except for a small number of studies, (Gill et al., 2009; Achyut el al., 2014; Iyengar et al., 2015). In order to fill this gap and better understand programmatic barriers to contraceptive uptake, BTSP-MLE applied a triangulated approach.

Data 100 family planning providers and 225 users were interviewed in a sample of 100 health care facilities of different levels across 32 districts in Bihar, coupled with 197 mystery client consultations.

Methods This study examined the quality of family planning counselling in the state of Bihar, India, using a triangulated approach, complementing standard data collection from provider and client exit interviews with mystery client consultations, with the mystery client data as the reference standard. The mystery client approach, being inconspicuous is expected to yield more accurate data than approaches using client or provider interviews or third-party observations (Huntington et al 1990 and 1993; Madden, 1997; Tumlinson, 2014; Das et al., 2012).

Findings Agreement between mystery client and exit interview data was low with actual clients over-reporting positive aspects (especially with regard to respectful care). Agreement between provider interviews and mystery client findings was also low but in an un-anticipated direction, with providers significantly under reporting 2 of 5 positive behaviours. In provider interviews, only around 20 percent reported that they explain to clients how to use the method, while they actually did so in a higher percentage (69 percent) of mystery consultations. Similarly, only 34 percent reported that they ask clients about reproductive goals while 63 percent actually did so for mystery clients.

Conclusion To our knowledge, the mystery client approach has not been used earlier to assess the quality of family planning services anywhere in India. Findings suggest that reliance on standard instruments to assess quality can yield an incomplete picture of actual provider practices. Modified or expanded methods of data collection on family planning service quality are needed and the mystery client approach should be considered wherever it is logistically feasible to do so. It can help explain findings from other methods as also contribute additional findings.
Financing Oral care: perspective from a Least developed country

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The global burden of oral disease has increased recently. About 333,090 cases of dental caries were recorded in the national database at the end of 2016; 23,733 cases presenting with late space infections. WHO Oral Health Database for SEARO region reports mean DMFT for 12-year-olds in Nepal as 2.3. Considering UK NHS dental charge of £56.30 (US$77.61) for treatment such as fillings, root canal work or removal of teeth, for a country with widely prevalent dental disease and Health expenditure per capita US$ 39.87, the financial hardship for affording dental care can be estimated. With 47.65% of total expenditure on health incurring from out-of-pocket, this heavy reliance on direct payments impose severe financial stress on people using health services. The impact on finances and economic productivity is significantly high for the least Developed Country (LDC) like Nepal where untreated dental caries in children is more prevalent than malnutrition and vitamin deficiency. The people are left to incur high, sometimes catastrophic costs from which they never recover. Lack of Health service utilization has been reported; as people tend to prefer traditional healers to health care centers for almost all the health problems; especially in people who believe health centers are costly. People visit Dental care providers only after the traditional measures fail to elicit positive outcome. Studies have shown that uncertain annual budget process, small fiscal space, uncertainties in commitments of external development partners have been found to affect effective allocation of resources for health care services in a resource poor country. While some amendments in policy can be done by designing of health care financing strategy to fit with the country specific features. Several researches have been conducted to identify appropriate health care financing scheme in the country. Now a major federal restructuring is under way, after decades long conflict, and the country has moved towards attaining Universal Health Coverage with major Health policy changes; the right to free basic health services being highlighted in the new constitution. The draft for new National Health policy is on the table while Health Insurance Act has been endorsed with a comprehensive social contributory health Insurance scheme underway. The issue regarding affordable dental care needs to be addressed and integrated at federal structure. The paper intends to highlight the status quo and the important aspects to implement in delivering affordable Oral Health care in LDC like Nepal.
Tuberculosis Stories

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As in many other tuberculosis (TB) burdened countries, TB research in Peru, as well as TB control strategies focus on densely populated metropolitan areas. During the last two decades Peru’s National TB program has prioritized actions in big cities, such as Lima where more than 80% of people with TB live. Despite recognizing indigenous people from the Amazon as a vulnerable group that should be a priority for TB actions, regulations and guidelines for TB control are based on the characteristics of people living in urban settings, located relatively close to primary and complex healthcare facilities.

Tuberculosis Stories illustrate through four short videos the challenges and resources faced by people with Tuberculosis using the voice of those affected by Tuberculosis (TB), in rural and disperse communities in the Peruvian Amazon. Community health workers, and public health workers, share with us the challenges to access TB diagnoses and treatment. The videos seek to raise awareness of the need for appropriate regulations, and strategies to respond to the characteristics and needs of rural and disperse communities.

The videos are part of the project “Examining health system performance for indigenous people in the Peruvian Amazon through the lens of tuberculosis control” (MR/P004172/1), funded by the Joint Health Systems Research Initiative (supported by DFID, ESRC, MRC and the Wellcome Trust), with the grant, and implemented by the London School of Hygiene & Tropical Medicine, the Instituto de Medicina Tropical Alexander von Humboldt at University Cayetano Heredia and the NGO Salud Sin Límites Peru between 2016 – 2017. The project aimed to investigate and identify the key features required by the health system to provide high-quality health services to populations living in rural and disperse communities. The Centre on Law and Social Transformation (CMI / UIB) contributed with funds for the video’s production. The videos were produced by Tamare Films.
Amrita Gill, USAID funded Vriddhi project/ IPE Global
Abstract Id: 1940

Effectiveness of Health Education program through Literate Women Groups in improving Reproductive Child Health practice, self-efficacy and wellbeing of rural women in Haryana, India

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Background- Haryana state introduced innovative health education program ‘Sakshar Mahila Samooh’ (SMS) in 2008. SMS is a literate women’s group (LWGs) that works at the village level. A small group of women hold meetings at a regular interval and disseminate health messages in the village on identified health topics. The effectiveness of the LWGs was seen to improve reproductive child health (RCH) knowledge and practices, self-efficacy and subjective wellbeing of rural women.

Methods- Cross sectional study design was used. Multistage sampling was done. District Panchkula was selected purposively. Cluster of 15 villages each was selected from two sub districts, i.e., Kalka and Panchkula. In some villages SMS groups were formed, while in others they were not formed or were not active. The villages were divided into two groups – (a) SMS functional and (b) SMS non-functional, on the basis of functionality or presence of SMS. Women with children less than three years were sampled using simple random sampling method. A pre-tested interview schedule was used to interview 240 women and a check list was used to observe the practices. Independent t test was used to test the differences in RCH knowledge and practices, self-efficacy and subjective wellbeing scores. Multiple linear regression was done to control for confounding. Ethical permission was obtained from the ethical committee of PGIMER Chandigarh. Written informed consent was taken from all participants.

Results- SMS were functional in 13 villages. Information dissemination activities by like rallies (mean-1.1) and school meetings (mean 1.46) were low. SMS groups were found in favourable terrain (plain area). A significantly greater percentage of women in villages with functional SMS belonged to majority religion (92.5%) and upper caste (47.5%), and had higher education levels (89.8%) compared to women in villages with non-functional SMS. There were no significant differences between the mean RCH knowledge (p=0.6) and RCH practice scores (p=0.4) in villages with functional and non-functional SMS. LWGs were not associated with improved self-efficacy and subjective wellbeing of women. Self-efficacy was higher in women in villages with non-functional SMS (p=0.01). Factors determining RCH practices included self-efficacy, education and occupation of woman.

Discussion- SMS is ineffective due to poor information dissemination activities and socio cultural context limiting the mobility of women for diffusion of information. SMS should be active in those areas which have difficult terrain, predominance of minorities and lower literacy levels. It should follow techniques to build self-efficacy of women.
Devil’s medicine or complementary care?

**Medical pluralism amongst traditional health practitioners in South Africa**

Co-authors: Lesley Gittings - University of Cape Town, School of Public Health and Family Medicine

**Background**

Medical pluralism is common in South Africa, with an estimated 51-80% of the population accessing traditional health products and services alongside biomedical care. The potential benefits of medical pluralism (such as more holistic and culturally relevant healthcare), and negative outcomes (including toxicity, adverse interactions and late engagement in biomedical care) have been explored and documented in a substantial body of literature. This evidence focuses on patients who practice medical pluralism, but less has been written about the ways that traditional healers engage with the biomedical sector. Understanding the biomedical beliefs and practices of traditional health practitioners is crucial so that no one is left behind.

**Methods**

This paper explores biomedical beliefs and practices of traditional health practitioners. Semi-structured individual and group interviews with 12 traditional health practitioners and 36 months of studying under traditional health practitioners (2014-present) in the Eastern Cape and Western Cape provinces of South Africa inform this work.

**Results**

Like their patients, traditional health practitioners demonstrate a great deal of complexity, creativity and diversity in their biomedical beliefs and practices. Many practitioners have been trained on common primary health challenges, including HIV, TB, diabetes and hypertension, and have been encouraged to refer clients to biomedical services. It is common for traditional healers to provide traditional health services flexibly to accommodate patient biomedical needs and avoid drug interactions, and some also practice as a community health worker, nurse or doctor. However, not all traditional health practitioners are accepting of biomedicine. Observations also revealed a mistrust and rejection of biomedical products and systems amongst some traditional health practitioners, and disbelief of medical understandings and categorizations of HIV.

**Conclusions**

In order to provide patients, with more complete, culturally relevant and holistic healthcare, it is crucial for policy makers and practitioners to gain insight into the different ways that traditional health practitioners work within the current biomedical paradigm.

This paper contributes to the evidence base on medical pluralism by documenting some of the ways that traditional health practitioners engage with the biomedical health system. It provides insight into the variety of biomedical beliefs and practices amongst traditional health practitioners through presenting commonly held strategies in the form of case studies. Last, it calls for more respectful, informed and reciprocal engagements between the traditional and biomedical health sectors and suggests that practitioners of both biomedical and traditional services are well placed to provide advice and input into policy and programming initiatives.
Mtisunge Gondwe, Malawi Liverpool Wellcome Trust, Clinical Research Programme
Abstract Id: 949

Establishing an integrated clinical and behavioural surveillance system to track patients from presentation at primary clinics through to tertiary level facility outcome in Malawi

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Introduction:
In collaboration with the Ministry of Health in Malawi, with funding from Meningitis Research Foundation we implemented full Emergency Triage Assessment and Treatment (ETAT) package intervention from April 2017 to September 2017, following the initial triage component at primary health care (PHC) setting in urban Blantyre district. The interventions at PHC include mHealth intervention to improve triage, emergency treatment, and improved referral system underpinned by a comprehensive training package and supply of emergency equipment and supplies. Through the system, paediatric patients from 0-14 years were tracked from primary to tertiary facility through outcome data.

Methods:
The study used both quantitative and qualitative methods. Using mHealth technology, we tracked patients aged 0-14 years presenting at 11 primary health centres to tertiary facility using Open Data Kit system at 4 different data collection points. The qualitative data from clinic staff and guardians of sick children was collected using semi-structured interviews and patient journey modelling. Longitudinal data from the mHealth phones were sent to central database at Malawi Liverpool Wellcome Trust, Clinical Research Programme (MLW), accessible for download to file maker pro or Microsoft access and analysed using STATA 12.1 software. Comparisons between median time to see clinician and median time to hospital by triage category was analysed using median/non-parametric comparison tests. Thematic analysing facilitated by Nvivo 11 was used to analyse qualitative data.

Results:
From April 2017 to September 2017, 187 emergencies and 14, 174 priorities were triaged from a total of 37, 251 children, and of these 788 were referred to QECH. The number of patients arriving at QECH after referral increased from 37% during feasibility study to 59% after full ETAT implementation. Ninety one of the emergencies stabilised at PHC and 35% of these were referred, suggesting that full ETAT intervention reduced the burden. Mean time to see the clinician by priority assessment was 8 minutes (Emergency), 19 minutes (priority) and 28 minutes (Queue) (p value 0.0001). Both clinicians and guardians have reported improved patient flow due to system in place.

Conclusion or Interpretation:
Implementing full ETAT package at PHC reduces burdens at tertiary level and improves clinical outcome. The next step to follow will be rolling out to other districts. Next phase will include cost effectiveness evidence and the development of tools for successful rollout.
Enabling Sexuality Discourse: Study on Sexual & Reproductive Health Rights of Youth with Disabilities

Co-authors: Sathyasree Goswami-National Foundation for India

Background: There is a lack of scientific information and policy direction on issues of sexual and reproductive health rights (SRHR) for 55 to 65% youth population of India, and within that a further marginalisation of Youth with Disabilities (YwDs) pose a herculean challenge for the realisation of SDGs Goal 3 on ensuring universal access to SRH care services. This paper, based on a exploratory study conducted in the state of Assam in 2015, explores the sexual health needs of YwDs and their access to SRH services.

Methods: According to the Census of India 2011, the total number of people living with disability in Assam is 530,300. A total of 180 in-depth interviews were conducted with three key cohorts - YwDs, parents/caregivers of YwDs, and teachers working with YwD in four special needs institutions located in four cities.

Results: Lack of information about sex, sexuality and SRHR overwhelmingly marked all the three cohorts. Although trained by the Rehabilitation Council of India (RCI), the special educators were not equipped to handle SRHR issues of YwDs. There was a glaring lack of sexuality education in the institutional curriculum. Majority of the parents and caregivers expressed their inability to approach such topics with YwDs as their mindsets resisted the identity of YwDs as sexual beings with agency and needs. The study poignantly points to rampant sexual violence amongst YwDs mainly by persons known to them, and the helplessness, inability and lack of knowledge and skills among care givers and teachers to adequately handle the repercussions of the same. Restrictive worldview, assumptions and moral judgments of healthcare professionals, caregivers and family members regarding YwDs has strongly emerged as a barrier in the YwD accessing adequate services and care. YwDs who need assistance in their daily lives with tasks such as getting dressed, washed, going to the toilet, changing sanitary napkins expressed discomfort and helplessness with such care givers.

Conclusion: Sensitisation to the vulnerability and SRH needs of YwD along with rational understanding of sexuality is essential to protect the SRHR of YwDs. In addition, equipping the public health system with skills and human resources will enable universal access to SRH services, paving the path for achieving the targets of SDG-3. Comprehensive sexuality education for youth in India should be inclusive of those with disabilities and should provide information specific to the needs of youth with various disabilities through various accessible mediums.
Gender, vulnerability, marginalisation and tuberculosis: Can patient trust bridge the chasm between access and treatment adherence?

Co-authors: Veloshnee Govender-Alliance for Health Policy and Systems Research; Lucy Gilson-Health Policy and Systems, School of Public Health and Family Medicine, University of Cape Town

Background: In South Africa, tuberculosis (TB) is the leading cause of death. Cape Town is among the three cities in the country with the highest TB burden. Poor treatment adherence persists despite improvements in the organisation and delivery of care. This is a challenge for both treatment outcomes and the health system’s ability to reach national and international TB targets framed in Sustainable Development Goal 3. TB requires long-term care, where the relationship with healthcare providers is an important influence on treatment adherence. This study sought specifically to explore and deepen insight, through a gender lens, into the role of trust in relationships between patients and healthcare providers, and its potential to influence TB treatment access and adherence. Therefore, it offers insights of relevance to wider considerations of health system responsiveness to patient needs.

Methods: The research was located in three local government-managed clinics in the City of Cape Town. The clinics were similar in TB patient load and performance indicators, but differing in level of TB-HIV integrated services. A qualitative case-study design including non-participant observations, focus group discussions and in-depth interviews with more than 50 patients, 20 healthcare providers and 10 healthcare managers was applied.

Findings: Patient trust in providers played a central role in seeking and adhering to treatment for TB. Many patients expressed both intent and motivation to complete their treatment. However, patient vulnerability - a complex outcome of gender, poverty and poor psycho-social support working across personal, community and health service levels - emerged as a critical influence over patient trust in providers and the health system. This had consequences for quality of patient-provider relationships, treatment adherence and experiences of marginalisation. Therefore, patient trust and adherence required that providers and the health system recognise and engage with the patient beyond the illness, by enabling patient access to socio-economic and psycho-social support systems.

Conclusion: Specific strategies for building TB patients’ trust in healthcare providers and the health system, with consequences for improved treatment access and adherence, include inter-sectoral action and partnerships; promoting gender-sensitive TB/HIV services; increasing psycho-social support; and rewarding patients for adherence and treatment completion. These recommendations have wider relevance for building patient trust and enhancing the responsiveness of the health system overall. Indeed, unless addressed, the challenges of patient trust in the health system are likely to undermine the transformative potential of South Africa’s proposed National Health Insurance and the achievement of universal health coverage.
'I can't climb stairs …. but it's normal' - Narratives of health care seeking/access in the context of chronic lung disease and disability in Sudan

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Chronic obstructive pulmonary disease (COPD) remains a major cause of morbidity and mortality worldwide. Estimations suggest that more than 90% of the death caused by COPD occur in low and middle-income countries (LMICs), where strategies for prevention and control are often insufficient and inaccessible. Despite the increasing burden of COPD, little is known about the experiences of people with chronic lung diseases when seeking and accessing health care. There is even less information on the situation of persons with COPD who also have disabilities, although these people tend to face disproportionate challenges when accessing health care services due to disabling physical and social environments. It is however important to explore and include their perspectives and experiences to design inclusive, context-specific and effective prevention and management strategies.

This project contains a pilot study, which aimed to explore the narratives of health care seeking/access with regard to chronic lung disease and disabilities in Gezira State, Sudan, a country where research on disability and lung health is very limited. In total, 27 participants (16 female, 11 male) with different symptoms of lung disease and disability types were recruited. Narrative interviewing was the main method to collect the data to shed light on their experiences of illness and health care seeking behaviour.

The participants' narratives of illness were complex and depended on different socio-cultural and socio-economic factors. Many participants did not consider their disability or lung disease a health issue, rather they perceived their illness(es) as normal and linked the causes to the 'will of Allah/God' or to age. These conceptualisations of normality and low disease awareness influenced the participants health care seeking behaviour and often resulted in delayed or no treatment. When seeking health care, participants commonly had multiple health care encounters before they received a diagnosis. Despite receiving a diagnosis, limited knowledge about diseases and health issues persisted. This highlights the need for a more participatory and holistic approach to designing effective education/communication strategies for both lung disease and disability based on the perspectives and needs of patients, carers and health care providers.

This study should be seen as an initial attempt to identify common themes in the lives of persons with COPD and disabilities when seeking and accessing health care. It is hoped that the findings will inform and direct future studies on this hitherto under-researched area.
Integrated and differentiated methadone and HIV care for people who use drugs: a qualitative study in Kenya with implications for implementation science

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Background: People who use drugs face significant health challenges necessitating integrated care. Kenya is introducing methadone treatment, a widely studied medication in high income settings, in response to challenges of opioid injecting and a linked epidemic of HIV. Epidemiological evidence supports the goal of integration of methadone and HIV care although an implementation science of how to organize integrated services is limited. We explored the delivery and integration of methadone treatment alongside HIV care in Kenya to support service development and build theories of implementation.

Methods: We used a qualitative study within one Kenyan city that had recently introduced methadone treatment. Semi-structured interviews were conducted with people visiting a community drop-in centre who were receiving methadone treatment from a nearby clinic (n=29), including people living with HIV (N=14), supplemented by a small sample of stakeholder interviews (n=3) and observation in the drop-in centre. Thematic analysis was used to abductively develop findings, drawing in particular on Mol’s theory of the logic of care.

Results: Respondents described co-located methadone and HIV care within a clinic embedded in community support systems. Daily directly observed clinic care was frequently challenging for people accessing methadone treatment and often stigmatizing for HIV treatment. Integrated care evolved through implementation. Client concerns at HIV related stigma were responded to by clinic staff and the community and health system through a ‘differentiated’ HIV care model: people continued with clinic based methadone but could access HIV treatment at a community centre or another HIV clinic of their choice. We use Mol’s logic of care framework to explore this implementation process. We discuss the active negotiation of care practices: people who use drugs, providers and community organisations within an enabling health system can be understood as ‘experimenting’ with care forms. This experimentation is bounded by the meanings of each treatment: methadone treatment is bounded by a focus on security and recovery, whilst HIV care has multiple meanings that allow for change and differentiation in care.

Discussion: Co-production and experimentation by a range of health system actors within a particular enabling environment can generate acceptable forms of integrated methadone and HIV care. Co-located care can generate HIV stigma and so attention to local negotiation of alternatives is essential. Differentiated HIV care should be a priority response for people who use drugs. An actor-network analysis fosters theoretical understanding of how evidence based interventions are made and shaped through implementation.
Assessment of Waiting Time at Health Facilities in a Sub-Saharan African Metropolis

Co-authors: Omorogbe Courage Guobadia - Central Hospital

Background: Waiting time is the time lag patients stay before attending to by clinical staffs or using health service needed. This delay in health service delivery is a canker worm at health facilities in low and medium income countries. This problem has additional dimensions in sub-Saharan Africa due to severe deficits in health care infrastructure and manpower in the sub region. Patients often wait for prolong periods in congested waiting rooms. In the worst scenarios the high patient to doctor ratio results in patients being given long appointments without appropriate evaluation and risk assessment. This has been a source of decline in the quality of health as during waiting times and long appointments complications often ensue and some health issues may progress or even become irreversible.

Justification of study: Major factors found to be responsible for prolonged waiting time have been amenable to simple solutions which can be applied in our health settings.

Methods: This was a descriptive cross sectional study which used probability proportion to size sampling to evaluate the average waiting time in the outpatient clinics of University of Benin Teaching Hospital (UBTH) [a government tertiary/ referral hospital offering primary, secondary and tertiary health care services] and St Philomena Catholic Hospital (SPCH) [a secondary hospital offering primary and secondary health care services]. A pretested standardized interviewer schedule with an observational check list was also used including factors found to be responsible was administered to participants (patients and staff). This study determined the prevalence of prolonged waiting and its effects on patients attending them. A total of 240 patient’s and 157 caregivers were interviewed. The instruments were analyzed using SPSS version 20.0.

Result: The average time spent in the outpatient clinics at UBTH was (235±0.27 minutes) and SPCH (199±0.48 minutes) both exceeded the SERVICOM client charter of 90 minutes. It also show that the commonest reasons for long waiting time were large number of patients with few healthcare workers (54%) and a myriad of infrastructural (36%). Likewise, longer waiting time was recorded in the mornings with those without health insurance.

Conclusion: Administrators in hospitals in the sub-region need to engender a paradigm shift to efficient time management and patient/client as gudtomer/king. Improved awareness of the SERVICOM Client Charter among their staffs and work on restructuring all units of the clinics towards achieving it will help.
Anadi Gupt, National Health Mission
Abstract Id: 2862

Confronting the Geographical barriers in Himachal Pradesh, India; providing healthcare in the remotest areas

Co-authors: Anadi Gupt-National Health Mission

Abstract

Himachal Pradesh is a northern state of India. Providing health care is a huge challenge in remote areas which have exceptionally harsh terrain which sometimes get cut off from the mainland due to heavy snow. Doctors and paramedics are un-willing to serve in such areas. The state government took slew of policy decisions for putting up models to provide healthcare to inhabitants of these areas. The policy decisions; models

The state categorized areas as per their remoteness and gave differential monetary incentives and extra marks in the entrance examination for post-graduation to doctors serving there. For inaccessible areas, a Tele-medicine model with collaboration of private sector was started. An innovative ‘Tele-stroke’ and ‘Tele-ECG ‘project were put in place to treat patients within crucial prescribed time limits. Diagnostic services, earlier available for only some part of the day in, were made available round the clock at subsidized rates through Public Private Partnership. It was decided that patients suffering from Cancer and Chronic Renal Disease be provided Chemotherapy and Dialysis, at their respective district headquarters through dedicated centres, for which they earlier used to travel long distances thereby losing money and time. Blood, was a commodity, which was available only at select places. By establishing Blood Storage Units, managed by local staff the state could provide blood in remote areas to decrease mortality due to Trauma and Obstetric complications. Decision was taken to place ambulances in strategic locations to reduce the response time in far flung areas. A free drop service for recently delivered women and sterilization clients was clubbed with the ambulance service. Results

The state managed to place doctors in the most of the far- flung areas. More than 20000 consultations were made through telemedicine. Tele-stroke project helped thrombolyse nearly 300 patients. The Tele-ECG project showed a significant decrease in pain to Aspiring time. Cancer care centres and dialysis centres administered around 500 cycles of chemotherapy and 20000 dialysis. Round the clock diagnostic labs were conducted. The ambulance service achieved an average response time of less than half an hour in rural areas. A total of 1 million emergencies were handled by the ambulance service since and 150 thousand clients availed free drop back service. Eleven BSUs were made functional. Conclusion

A mix of right policies, modern technology and strategic public private partnership helped the state in providing healthcare to the inhabitants of the most remote and underserved areas.
Ashish Kumar Gupta, Population Council, New Delhi
Abstract Id: 2232

Bridging the equity gap to reach adolescents: new evidence on India’s national CHW programme

Co-authors: Ashish Kumar Gupta—Population Council, New Delhi; Sapna Desai—Population Council, New Delhi

Background

In India, close to one million ASHA workers form the backbone of community health systems. Evidence till date supports the role of ASHAs in improving access to maternal health services, but there is limited analysis of their outreach amongst vulnerable groups. Since adolescent girls in India face particular barriers to service utilisation and in accessing information, this paper examines (i) the outreach of ASHAs amongst adolescent girls, with a focus on equity and (ii) whether interaction with an ASHA is associated with improved health behaviour. We also explore how this evidence provides insights into the potential expansion—and limits—of India’s current model of community health worker-led services.

Methods

We utilised data from a cross-sectional survey of 7,766 unmarried and 5,206 married adolescent girls (ages 15-19) in Bihar and Uttar Pradesh, two of India’s largest and most impoverished states. We examined the outreach of ASHAs and equity amongst adolescents who reported an interaction in the past twelve months through descriptive analyses. Logistic regression was performed to explore associations between interaction with ASHAs and health behaviours, adjusted for potential confounders.

Results

While a large majority of girls were aware of ASHA workers, 5 percent of unmarried girls and 27 percent of married girls reported an interaction in the past year. Focusing on outreach reported by married girls, we did not observe a variation by education or wealth quintile. Coverage amongst rural, lower-caste girls was higher, as well as amongst girls with at least one child. We observed strong evidence for an association of interacting with an ASHA and married girls’ knowledge of maternal health and family planning; use of institutional delivery and postnatal care; intention to use contraception; and breastfeeding practices, but not for antenatal checkups and contraceptive use.

Discussion/Conclusions

ASHA outreach was very low amongst unmarried girls, and limited to less than one in three married adolescent girls. ASHAs appeared to facilitate equitable coverage through higher outreach amongst lower caste, rural girls—indicating their critical role in advancing community level health systems. Our analysis also suggested an association between ASHA interaction and improved maternal and child health care seeking. However, gaps in ASHA outreach—evidenced by the relative exclusion of zero parity and unmarried girls—underscore their limitations in reaching a broader population beyond mothers and children. Community health systems must consider models that capitalize on ASHAs’ potential to bridge equity gaps and information needs, while expanding overall outreach.
Evaluaciones de diseño y ejecución presupuestal, un instrumento del presupuesto por resultados: algunas experiencias aplicadas de salud en el Perú


Antecedentes: La evaluación de políticas, programas y proyectos ha sido un componente central de la agenda de modernización de la gestión pública orientada a resultados en América Latina, y por supuesto, en el Perú. Año a año la asignación de recursos se viene incrementando para abordar los principales problemas de salud pública en el Perú, sin embargo seguimos encontrando deficiencias en el logro de resultados sanitarios. Desde sus inicios en el año 2008, las evaluaciones de diseño y ejecución presupuestal (EDEP), uno de los instrumentos desarrollados por el Ministerio de Economía y Finanzas (MEF) en el marco de la implementación del presupuesto por resultados (PpR), buscan proporcionar información confiable acerca de la consistencia e implementación de las intervenciones públicas, con el fin de mejorar su gestión y tomar decisiones presupuestales informadas.

Objetivo: Describir a las EDEP como instrumento del PpR y presentar su metodología, operación y resultados, a partir de experiencias aplicadas en el sector salud del Perú.

Metodología: Estudio descriptivo, en relación a las evaluaciones de diseño y ejecución presupuestal. Las EDEP ponen énfasis en analizar la lógica del diseño de un programa o intervención, así como los aspectos vinculados con su implementación y desempeño (eficacia, eficiencia, calidad) en la entrega de bienes o provisión de servicios a la población.

Resultados: A casi 10 años de su implementación, se han realizado 57 EDEP de diferentes sectores, de las cuales siete están relacionadas a intervenciones en salud, entre las que se incluyen: el Sistema Integral de Salud, el servicio de vacunación, atención a partos normales, atención de infecciones respiratorias agudas y enfermedades diarreicas agudas. Se observa un marcado progreso no solo en términos metodológicos y de organización para su implementación, sino también en el uso de sus resultados (esto último a un ritmo más lento, pero se va ganando espacio en la toma de decisiones informadas a partir de los resultados de las evaluaciones).

Conclusiones: Más allá de las discrepancias en torno a la aplicación de este instrumento, las EDEP y sus matrices de compromisos han permitido la utilización de los resultados de las evaluaciones y se han convertido en un mecanismo para generar información válida que permita mejorar los servicios públicos en favor de la población.
Sajjad Haider, University of Balochistan
Abstract Id: 1908

Frequency and evaluation of the perceptions towards cesarean section among pregnant women attending public hospitals in Pakistan and the implications

Co-authors: Sajjad Haider-University of Balochistan; Fahad Saleem-University of Balochistan

Objectives: There is increasing the prevalence of cesarean sections (CS) worldwide; however, there are concerns about their rates in some countries, including potential fears among mothers. Consequently, we aimed to determine the frequency of CS, and explore patient’s perception towards CS attending public hospitals in Pakistan, to provide future guidance.

Methods: A two-phase study design (retrospective and cross-sectional) was adopted. A retrospective study was conducted to assess the frequency of CS over one year among four public hospitals. A cross-sectional study was subsequently conducted to determine patients’ perception towards CS attending the four tertiary care public hospitals in Quetta city, Pakistan, which is where most births take place.

Results: Overall prevalence of CS was 13.1% across the four hospitals. 728 patients were approached and 717 responded to the survey. Although 78.8% perceived CS as dangerous, influenced by education (p = 0.004), locality (p = 0.001) and employment status (p = 0.001), 74.5% of patients were in agreement that this is the best approach to save mother’s and baby’s lives if needed. 62% of respondents reported they would like to avoid CS if they could due to post-operative pain, and 58.9% preferred a normal delivery. There was also a significant association with education (p = 0.001) and locality (p = 0.001) where respondents considered normal vaginal delivery as painful.

Conclusion: The overall frequency of CS approximates to WHO recommendations, although there is appreciable variation among the four hospitals. When it comes to perception towards CS, women had limited information. There is a need to provide mothers with education during the antenatal period, especially those with limited education, to accept CS where needed.
Putting neglected agenda under spotlight: Exploring approaches to reduce Maternal Mortality in Myanmar

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Background: In spite of the remarkable progress, Myanmar remains one of the countries in South East Asia with highest maternal mortality ratio. To respond the high maternal mortality, we present the factors contributing maternal death, limitations and key challenges encounter during maternal health care delivery and strategies to reduce maternal mortality using Magway, one of the regions in Myanmar with highest MMR as case study.

Methods: An exploratory study was conducted using both quantitative and qualitative methods in Magway Region having population of 3,917,055 in 2016-17. Data on maternal death review, HMIS and DHS were reviewed to understand the major contributing factors for maternal death; and coverage and gaps of maternal health utilization. Then service delivery gaps, constraints encountered by healthcare providers in delivering maternal healthcare services and context specific approaches to enhance maternal healthcare utilization and reduce maternal death were identified via root cause analysis workshop with healthcare providers and key-informant interviews with healthcare managers and administrators.

Results: Pre eclampsia/eclampsia (26%) and postpartum hemorrhage (25%) were the leading causes of maternal death in Magway. AN care utilization for at least four times, skilled delivery and facility delivery among the deceased were 39%, 60% and 8% respectively while those indicators among alive mothers were 59%, 68% and 38%. Most of the maternal deaths were related to delay in reaching care due to transportation difficulties (56, 73%) and delay in decision to seek care by care takers or delay in decision to refer by care providers (15, 19%). According to qualitative findings, the major factor influencing maternal death was lack of timely access to care in case of maternal emergency which was again contributed by late detection of high risk mothers due to poor quality AN care, late referral due to transportation difficulties, lack of effective emergency referral system, providers’ incompetency, over confidence of providers in handling high risk cases and lack of skilled provider at the time of emergency. Those factors were largely interrelated with limitation in human resource, wide geographic areas to be covered by basic health staff, having migrant clusters in the areas and high workload among health care providers.

Conclusions: To reduce maternal death in Magway Region, this study highlighted improving quality of maternal health care service delivery by reassessing the competency of health care providers and provision of necessary training, reallocation of workload among basic health staff and establishment of community based emergency referral support program.
Association between neonatal mortality rate and place of birth: does mortality vary with varying health facility structures in Bangladesh?

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Background: Reducing Neonatal Mortality Rate (NMR) to 12/1000 live births by 2030 is one of the Sustainable Development Goals (SDG). Earlier studies have shown facility-based delivery contributes in reducing NMR. However, although in Bangladesh the facility-based delivery increased from 5% in 1994 to 47% in 2016, NMR has not reduced at the same pace.

Objective: the current study investigates the association between place of delivery and NMR. It further explores the difference between NMR for babies born at different facilities.

Methods: the study used data from the Health and Demographic Surveillance System of Chakaria, a rural area under the Cox's Bazar district of Bangladesh. Between January'12-December'17, we examined the NMR of 12,503 newborns. We followed them from birth to 28 days of life. We analyzed mortality using Mortality Rate Ratio (MRR). Place of birth included: home, public hospital, for-profit private hospital and not-for profit NGO clinic and private hospital. Mortality was analyzed according to place of delivery.

Results: 21% of babies were born at health facilities and the rest 79% were home deliveries. Among the babies who were born at health facilities, 68% were at the for-profit private hospital, 24% at the not-for-profit private hospital and NGO clinic and 8% at the public hospital. The overall NMR was 32/1000 live births and mortality was highest for babies born at the public hospital, followed by 43/1000 live births at the for-profit private hospital, 31/1000 live births at home, 21/1000 live birth at the NGO clinic and 15/1000 live births at the not-for-profit private hospital. The MRR between not-for-profit facilities (NGO and private hospital) and the for-profit private facility was 2.42(95% CI: 1.27-5.06) indicating 2.4 times higher NMR at the for-profit private facility. The MRR between the not-for-profit facilities and the public hospital was 3.50(95% CI: 1.41-8.25) indicating 3.5 times higher NMR at the public facility.

Conclusions: The varying NMR at the different facilities belonging to the same region of a country warrants investigation of factors that contributed towards increased or decreased NMR at the concerned facilities. The administrative and management structures and the accountability mechanisms at these various facilities need to be explored carefully to identify these factors. The health systems of the country need to work towards bringing a synergy in service delivery model among the various health facilities from the different sectors in order to achieve the SDG target for NMR.
Mohammad Hasan, International Centre for Diarrhoeal Disease Research, Bangladesh
Abstract Id: 3646

Mobile based integrated nutrition promotion and cash transfer to improve nutrition knowledge

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Background: Maternal and child under nutrition is one of the world’s most serious but least addressed health problems. Globally, undernutrition contributes to around 3.2 million children's deaths annually and leads to 11% reduction in DALY. Bangladesh is also a country with highest burden of maternal and child undernutrition. One of the key factor is inadequate knowledge and resources at the maternal, household, and community levels, which leads to poor maternal diet in pregnancy and inappropriate infant and young child feeding practices.

Community-based nutritional education is recognized as a key strategy to combat maternal and child undernutrition. However insufficient numbers of health workers, poor supply chain management, financial, social and cultural barriers restricts to achieve high coverage of this interventions.

Methods: The study was conducted in two Unions of Kendua sub-district, Netrokona District from July 2014 – June 2015. An integrated mobile based delivery platform for nutrition education and conditional cash transfer were developed to improve the knowledge and perception on nutrition during pregnancy and the 1st year of a child’s life.

A total of 344 women were enrolled, of whom 172 were pregnant at the time of enrollment, while rests were lactating mothers. During enrollment all mother were provided with a mobile phone with active connection. During the six months of intervention period they received the nutrition message and counseling by voice message and conversations with a trained nutrition counselor from a call centre.

Additionally cash transfer of US$10 per month was made through the participants' mobile phone. We used a soft conditional approach with mothers being asked to listen to the messages and participate in counseling to avail the cash transfer.

Results: During the intervention period the enrolled mothers received average 42 voice messages and 10 direct counseling. Our study findings shows that the knowledge on timing of initiation of breastfeeding of baby has been increased in endline (97%) compared to baseline (85%). Significant changes have also been observed in the knowledge of the duration of exclusive breastfeeding (98% at endline vs 91% at baseline). The knowledge of use of colostrums, timing of continued breastfeeding, appropriate IYCF practice also increased significantly during the endline.

Discussion/conclusions: Our pilot study indicates that using mobile platform to enhance communication about nutrition is a feasible option and which significantly change the nutrition knowledge of mother. It has the potential to be used in large scale programs in Bangladesh and elsewhere in similar settings.
Utilization of the Ghana National Health Insurance Scheme and Its Association with Patient Perceptions on Health Care Quality

Co-authors: Nel Jason Haw-EpiMetrics, Inc.

Objective: To determine the association between the utilization of the Ghana National Health Insurance Scheme (NHIS) and patient perceptions of quality of care.

Methods: Ghana Demographic and Health Survey (GDHS) 2014 had 19 questions on perceptions of quality of care received during the last reported health visit (n = 4,332). These questions were summarized into an overall 100-point perception score using item response theory (IRT). Patients were divided into three utilization categories: those paying with their NHIS card fully, those paying with their card and out-of-pocket (OOP), and those paying fully OOP. A multiple linear regression model was used to measure the association between NHIS utilization and overall perception.

Findings: In general, NHIS utilization was negatively associated with overall perception, and the difference across utilization categories was higher among private facility users than public facility users. Among private facilities, those who paid fully with NHIS reported five points lower than those who paid fully OOP (p = 0.005). Among public facilities, the difference is only 0.66 (p = 0.4342).

Conclusion: GDHS 2014 helped reconcile equivocal conclusions from previous studies on the association between NHIS utilization and patient perceptions on a national scale. NHIS utilization was a negative predictor for patient perceptions, but the differences are more nuanced according to type of facility. Future GDHS rounds should continue measuring perceptions in aid of policy to improve service delivery under the NHIS.
Towards an evidenced based community health worker training model: Roles, responsibilities and characteristics of lay community health workers involved in diabetes prevention programmes

Co-authors: Jillian Hill - South African Medical Research Council; Andre Pascal Kengne - South African Medical Research Council

Background:

South Africa (SA) is currently home to the largest population of people with diabetes in Africa. Diabetes in SA affects the population across ethnic and income diversity, with the previously disadvantaged being among the most affected. Efficacy trials of diabetes prevention programmes (DPP) have provided evidence of the effectiveness of lifestyle interventions in preventing or postponing the onset of diabetes. Completed/ongoing implementation studies of DPP around the world are providing additional evidence to support the application of evidence from efficacy trials of DPP, using less intensive approaches and less skilled workers such as community health workers (CHW) as interventions implementers.

Aims:

To develop and pilot a feasible, sustainable model to train CHWs on basic diabetes risk assessment, prevention/management in SA.

Method:

Phase 1: Systematic review (complete/published)

We conducted a systematic review to examine the characteristics of CHW involved in DPP and their contributions to expected outcomes.

Phase 2: The development of a diabetes prevention focused, CHW training model for SA (in progress)

Identifying best practice CHW training models from Phase 1. Using a community based participatory approach, stakeholders including community leaders/members, diabetes experts, dieticians, sports scientists, NPO’s employing CHWs etc. will be invited to review and give input into existing best practice models and assist in adapting it to be appropriate for the communities involved. Two best practice CHW training models will be identified to take forward into the piloting phase. The identified models will be adapted for the communities in the SA-DPP that targets Black and Coloured urban communities in the Western Cape.

Phase 3: Piloting of the CHW training models (next phase)

Discussion:

The ongoing primary health care (PHC) re-engineering in SA has identified population-based approaches to the delivery of preventive and curative PHC with the inclusion of community-based workers as an integral part of the PHC outreach team. The goal of the CHW in the PHC outreach team at a household level is to strengthen health promotion/prevention to improve population health and to identify at risk individuals/families which need further interventions. It is therefore imperative to develop and validate context appropriate tools to facilitate the training of CHW in the provision of community-based screening and prevention services for common NCDs such as diabetes in the SA context.
Technical quality of delivery care in private- and public-sector health facilities in Enugu and Lagos States, Nigeria

Co-authors: Atsumi Hirose-University of Aberdeen; Karolinska Institutet; Ibrahim Yisa-Partnership for Transforming Health Systems II (PATHS2); Amina Aminu-PATHS2; Nathanael Afolabi-PATHS2; Makinde Olasunmbo-PATHS2; George Oluka-PATHS2; Khalilu Muhammad-PATHS2; Julia Hussein-University of Aberdeen

Background

Private-sector providers are increasingly being recognized as important contributors to the delivery of healthcare. Countries with high disease burdens and limited public-sector resources are considering using the private sector to achieve universal health coverage. In maternal and neonatal health care in particular, evidence suggests that a substantial proportion of women use intrapartum care in the private sector with varied utilisation patterns by socioeconomic status across countries. However, evidence for the technical quality of private-sector maternal healthcare is lacking. This study assesses the technical quality of maternal healthcare during delivery in public- and formal private-sector facilities (both for-profit and not-for-profit) in two southern states of Nigeria, from a system perspective.

Methods

We conducted a survey of case records of women admitted for delivery or complications of childbirth in public and private-sector facilities in four Local Government Areas (LGA) each in Enugu and Lagos states in Nigeria. Two-staged cluster sampling with stratification was used to select representative samples of case records. Information to assess predetermined clinical criteria of good practice was extracted, and a summary index (the skilled attendance index, or 'SAI') was calculated for each woman, which indicates the percentage of met criteria. Linear regression models examined the relationship between SAI and the private and public sectors, controlling for confounders.

Results

In total, 468 cases from Enugu and 663 cases from Lagos were included. The median SAI was 54.8% in Enugu and 85.7% in Lagos. The private for-profit sector’s SAI was lower than and the private not-for-profit sector’s SAI was higher than the public sector in Enugu (coefficient = -3.6 [P = 0.018] and 12.6 [P &lt; 0.001], respectively). In Lagos, the private for-profit sector’s SAI was higher and the private not-for-profit sector’s SAI was lower than the public sector (3.71 [P = 0.005] and -3.92 [P &lt; 0.001]).

Conclusions

Results indicate that the technical quality of private for-profit providers’ care was poorer than public providers where the public provision of care was weak, while private for-profit facilities provided better technical quality care than public facilities where the public sector was strong and there was a relatively strong regulatory body. Our findings raise important considerations relating to the quality of maternity care, the public-private mix and needs for regulation in global efforts to achieve universal health care.
Developing a monitoring framework for universal access to health and universal health coverage

Co-authors: Natalia Houghton - Pan American Health Organization; Soledad Urrutia - Pan American Health Organization; Ernesto Báscolo - Pan American Health Organization

Abstract. In late 2014, the Member States of the Pan American Health Organization (PAHO) adopted resolution CD53.R14 (Strategy for Universal Access to Health and Universal Health Coverage). Member States asked PAHO to prioritize areas of technical cooperation that would help countries advance and measure their progress toward the strategy's objectives. In response to this mandate, PAHO's Health Systems and Services Department (HSS) led the development of a monitoring framework for policies and actions aimed at achieving universal health access and coverage. The objective is to strengthen national monitoring and evidence-building activities that inform on the progress and performance of policies and action plans implemented by the Member States.

Methods. Existing methodological proposals and conceptual models related to universal health access and coverage were reviewed. A literature review was also conducted to identify relevant indicators. A stakeholder consultation process with health systems experts in the region of the Americas followed this review.

Results. A comprehensive framework for monitoring policies and actions for access and universal health coverage was developed. The monitoring framework contains four components (strategic actions, immediate results, intermediate results and impact results) and identifies a set of policy options that guide health systems transformations towards universal health access and coverage. A total of 59 indicators were included within each component of the monitoring framework. The proposed approach for using the framework focuses on the assessment of inequities in access and coverage conditions, as well as in the collection of qualitative evidence to assess the extent to which health policies and actions are being implemented.

Conclusions. The proposed framework could contribute to strengthening health systems transformation processes toward universal health access and coverage, making it possible to advance toward the milestones set forth in the Declaration of Alma-Ata on Primary Health Care.
Natasha Howard, LSHTM
Abstract Id: 2013

Health for all? A qualitative study of health services provision amidst structural violence in migrant camps in northern France

Co-authors: Benita Pursch-King’s College London; Alexandra Tate-King’s College London, Faculty of Medicine; Helena Legido-Quigley-National University of Singapore; N Howard-LSHTM

Background

Of the millions of EU immigrants, France has become host to approximately 368,000 ‘persons of concern’: a UNHCR umbrella term for refugees, people in refugee-like situations, asylum-seekers, stateless, and internally-displaced people. While some plan to settle in France, others stay temporarily while trying to reach their intended destination. Despite relatively small numbers, they are the subject of contentious political debate in France, with the ‘seemingly insurmountable issue of migrant camps in northern France’ a key debate in the 2017 presidential election. The responsibility of receiving and supporting these migrants falls to local governments. In northern France, a stronghold of the Front National party, this has typically meant anti-migrant policies and government intolerance. This study aimed to explore provision of health services to migrants in Calais and La Liniere, through a structural violence lens, to contribute to discourse on the effects of structural violence on the functioning of non-state service providers and the engagement of migrants in precarious conditions with health services.

Methods

Semi-structured key informant interviews were conducted with 20 non-governmental service-providers, 13 who had worked in Calais and 7 in La Linier migrant camps. Data were analysed thematically, using manual line-by-line coding.

Findings

Themes that emerged from analysis were: (i) manifestations of structural violence, (ii) structural barriers to state and non-state health and welfare services, and (iii) the effects of structural violence on material and non-material social determinants of health, and the tension between those two. To maintain a balance of services provision, NGOs developed techniques of coordination, adaptability, flexibility, and stability through which they provided semi-stable services in an ever changing and insecure environment. Providers expressed mixed views about the impact of their services on the lives of migrants. Although participants saw the overall provision of services as beneficial, they voiced concern about emerging issues of dignity and disempowerment and how humanitarian aid exacerbated these issues.

Conclusions

The role of NGOs in providing migrant health services in France is complex. While the services themselves are imperfect, findings suggest that NGOs are also working within a context of structural violence exerted by the French state, which affects the ways services can be provided and imposes barriers that negatively affect the health and wellbeing of migrants.
Brokerage in community health systems

Co-authors: Benjamin Hunter-King's College London

Community health workers are a valuable contact point for accessing appropriate healthcare, particularly in light of exclusionary practices that characterise some health systems and the limited access to information on costs, quality and health outcomes. This paper presents a novel approach for the critical study of community-based health work; one that pays close attention to personal histories and agency amongst workers in order to better understand their practices. Drawing from social and political theories of brokerage, the paper introduces a healthcare brokerage framework focusing on intermediaries' facilitation of access to healthcare. Six areas of interest are outlined for studying community health work as forms of healthcare brokerage: the nature of brokerage activities; social relations between brokers and other groups; benefits to each group that participates in brokerage; attempts by brokers to consolidate their position; personal costs of engaging in brokerage activities; and ways in which brokers react to changes in their context.

The brokerage framework is applied to empirical data generated in urban slums in Uttar Pradesh, India as part of research on a health voucher scheme in which a cadre of women workers were paid commission in return for promoting use of vouchers to receive health services at participating private hospitals. Observation-based field notes and transcripts from 59 interviews with 41 people were analysed using pre-determined questions based on the six areas of interest in the brokerage framework.

The women workers adopted roles beyond the voucher distribution activities envisaged by programme designers. They encouraged dependency on personal services for which they would receive commission by manipulating programme information to emphasise personal roles in facilitating access to care and by mediating communications and fee negotiations with healthcare providers. Workers had previously held other positions as community workers, indicating a personal trajectory in which they were able to accumulate experience and status that provided a basis for future employment and income. Some sought additional payments from hospitals and users for their brokerage activities, reflecting a tension when access to otherwise expensive or unattainable services is determined by people who themselves are financially insecure. The same personalised relationships that permitted brokerage simultaneously encouraged personal attacks in the event of programmatic problems.

A healthcare brokerage framework sheds light on personal strategies in community health work and enhances our understanding of particular behaviours. Brokerage potentially undermines healthcare entitlements and exacerbates expenditure, and such risks need to be assessed when designing community health interventions.
Private finance and the healthcare sector

Co-authors: Benjamin Hunter-King's College London

Background

This paper examines a re-orientation of development aid for health towards the ‘leveraging’ of private investment. This is part of a wider shift for development aid as actors such as the World Bank and International Monetary Fund argue private investment is necessary to fill a gap of USD 2.5 trillion required to achieve sustainable development globally. Calls to promote private investment are particularly acute in the healthcare sector due to a well-documented gap in healthcare infrastructure.

Methods

This analysis draws on policy documents, annual reports, online databases and media sources to examine the ‘private turn’ in development aid for health. We discuss the type of projects being funded through ‘blended’ public-private finance, their framing and the implications for achieving universal health coverage.

Findings

The healthcare projects being funded with private finance are typically located in ‘emerging economy’ countries where the growing burden of non-communicable diseases presents commercial opportunities for the expansion of corporate healthcare chains. Business models for these healthcare chains generally fall into one of two categories: high-cost care with advanced medical treatments, and lower-cost models premised on high-throughput of users or cross-subsidisation of care for poorer users by those who are less poor. A range of new actors are extending their influence in healthcare systems as owners of these healthcare chains, including development finance institutions from high-income countries, and corporate investors such as private equity funds and fund management agencies.

Close examination of the framing of projects indicates a selective interpretation of the Sustainable Development Goals (particularly goal 3) to focus uncritically on a vision for ‘universal health coverage’ that diverts attention from the social and health system distortions taking place. Private investors and their proponents argue that the healthcare chains promote access to ‘affordable’ and/or ‘high-quality’ care, but in doing so obfuscate issues around inequality and the segmentation of healthcare systems: high-cost models are restricted to those who can afford user fees or private insurance, while high-throughput models offer limited care packages, distributed through discretionary arrangements.

Conclusions

Little attention is being paid to the ways in which private investments in healthcare are ‘locking in’ social segmentation and particular models for healthcare provision and financing, and the implications for achieving the Sustainable Development Goals and universal health coverage. Researchers and policy-makers urgently need to scrutinise the healthcare expansion being funded using private finance, and the medium- and long-term risks involved.
Jennifer Hutain, Concern Worldwide
Abstract Id: 1293

Engaging communities in the process of conducting verbal autopsies for child deaths: an example from the urban slums of Freetown, Sierra Leone

Co-authors: Jennifer Hutain-Concern Worldwide; Henry Perry-Johns Hopkins School of Public Health; Alain Koffi-Johns Hopkins School of Public Health; Megan Christensen-Concern Worldwide; Sonnia-Magba Bu-Buakei Jabbi-Statistics Sierra Leone; Thomas T Samba-Sierra Leone Ministry of Health and Sanitation; Emily Cummings-Concern Worldwide; Reinhard Kaiser-Centers for Disease Control and Prevention

Background

Verbal autopsies (VAs) can provide important epidemiological information about the leading causes of death in resource-constrained settings, particularly for child deaths. Even though a growing number of studies have been conducted to assess the validity of VA algorithms, the programmatic experience of engaging local communities in the VA process has received little attention in the published literature. This presentation contributes to this knowledge by describing the implementation of a VA protocol as part of an Operations Research (OR) Project conducted within a child survival project in the slums of Freetown, Sierra Leone. Concern Worldwide, an international non-governmental organization (NGO), implemented the project in collaboration with the Ministry of Health and Sanitation (MOHS) of Sierra Leone, for the purpose of informing community-based actions and interventions.

Methods

Using a database of 222 deaths among children under 5 years of age that were registered by Community Health Workers (CHWs) in five urban slums of Freetown between 2014 and 2017, local clinician used a VA protocol to interview caretakers. Symptoms were analysed using the InterVA-4 algorithm to determine the most likely cause of death. Care-seeking behaviours were determined from multiple-choice and open-ended questions. The results were shared with community stakeholders as part of a participatory, community-based health information process.

Results

The analysis included 86 neonatal (0-27 days) and 136 children (1-59 months) deaths. Among neonatal deaths, the most common cause of death was neonatal pneumonia (55%); among children (1-59 months) deaths, the most common causes were pneumonia (46%) and malaria (29%). Key themes in care-seeking identified included use of traditional medicine (14% of deaths), absence of care-seeking (27% of deaths), and difficulty reaching the health facility (8% of home deaths) during fatal illness.

Discussion

Conducting VAs as a collaborative process with communities can provide valuable cause-of-death and care-seeking data that can be used for local-level decision-making. The findings have practical implications for engaging the community in reducing the number of preventable deaths through expanded efforts at prevention and early treatment. With appropriate design and implementation, a functional VA system can contribute to routine, community-level vital events monitoring by community stakeholders. Social autopsy elements can be customized to local contexts and are just as, if not more, important to a participatory community-based health information system and to local health-systems strengthening by mobilizing the community to take actions to prevent and treat the leading causes of mortality in children and reduce barriers to appropriate care.
BARRERAS Y OPORTUNIDADES EN EL ACCESO Y UTILIZACIÓN DE LOS SERVICIOS DE SALUD PARA ADOLESCENTES EN MORELOS, MÉXICO: RESULTADOS UTILIZANDO LA METODOLOGÍA DEL CLIENTE SIMULADO

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Antecedentes: Los adolescentes constituyen una población prioritaria mundial. Para poder atender sus necesidades de salud, surgen los servicios amigables. En estos servicios, los adolescentes pueden solicitar información y consejería sobre métodos anticonceptivos, prevención de enfermedades de transmisión sexual y sobre otras áreas de salud. Estos servicios deben contar con normas y protocolos que permitan a los prestadores reconocer en los adolescentes su condición de individualidad, instruirlos en su responsabilidad con su salud y a asumirla: sin ser juzgados, sin ser sancionados y sin ser exhibidos. El presente estudio evaluó la amigabilidad y desempeño de los servicios de salud para adolescentes en los Servicios de Salud del Estado de Morelos (SSM). Material y métodos: Estudio cualitativo descriptivo, utilizando la metodología del cliente simulado. Participaron dos mujeres y dos hombres, mayores de 18 años, representando cuatro perfiles (condiciones sociodemográficas y de salud) durante la búsqueda de atención en 11 unidades médicas pertenecientes a los Servicios de Salud del Estado de Morelos (SSM). Se realizaron 44 observaciones participantes y, a través de entrevistas semiestructuradas y grupos focales, se reconstruyeron las experiencias de los adolescentes, identificando las principales barreras y oportunidades en el acceso y utilización de estos servicios, con base en las características de amigabilidad (accesibilidad, oportunidad, seguridad, aceptabilidad, continuidad, actitud del personal). Resultados: Se identificaron unidades de salud con mayor y menor presencia de las características de amigabilidad. Las principales características facilitadoras presentes en las unidades con una oferta más amigable fueron: atención por personal joven, interés mostrado por el personal de salud, cortos tiempos de espera, privacidad del lugar de atención y el tiempo de consulta suficiente para resolver las dudas y/o necesidades. Las principales barreras identificadas fueron: atención en la sala de espera, comentarios ofensivos de los proveedores, tiempos de espera prolongados y desinterés del personal por aclarar las dudas de los usuarios. Conclusiones: En los SSM se realizan esfuerzos importantes para fortalecer la atención en salud de los adolescentes, sin embargo, ésta aún es muy heterogénea y persisten prácticas poco amigables que ponen en riesgo los resultados en salud alcanzables con su implementación.
Uduak-Abasi Idiong, State Ministry of Health

Abstract Id: 2616

**SEXUAL/REPRODUCTIVE HEALTH KNOWLEDGE AND PRACTICES AMONG THE DEAF/SPEECH-IMPAIRED SECONDARY SCHOOL STUDENTS IN CALABAR AND AKURE, NIGERIA**

Co-authors: Uduak-Abasi Effiong Idiong-State Ministry of Health; Christie Divine Akwaowo-University of Uyo Teaching Hospital, Uyo

There are about 17 million deaf/speech-impaired persons in Nigeria. Data on the health of deaf people are lacking, especially in developing countries. The few available health data show that deaf populations bear a significantly greater disease burden than the general population; and due to a complex interaction of socioeconomic, political and cultural factors, they have much less access to sexual/reproductive health information, medical facilities, and conventional healthcare services. Awareness of health needs of deaf people among policy makers and health systems administrators is poor, leading to chronic marginalization and exclusion of deaf people from many health indices surveys and national/regional health programs. This study was conducted to examine the sexual/reproductive health needs of the deaf/speech-impaired secondary school students in Calabar and Akure in South-South and South-West Nigeria respectively. Cross-sectional surveys were carried out with all consenting adolescent deaf students. In Calabar, 52 students participated, with average age of 17.5 years. 94% of them had ever had sex, with mean age at sexual debut being 11 years. 74% of the girls had ever had sex for money, an average of 6.2 times each; while 76% of the boys had ever paid for sex. Furthermore, 74% of the girls had been raped before, an average of 3.4 times each. Mean age at first rape was 10 years. Only 17.3% of them were knowledgeable of HIV/AIDS, whereas 65.3% were involved in unprotected sex within the last 2 years. Data obtained from Akure were less drastic. 60 students participated, average age 18.1 years. Girls ever rape were 40%, with mean age at first rape 11.7 years (range=3-18 years). 56.7% had non-marital sex partners, average of 3.2 partners each. 44% were knowledgeable of HIV/AIDS. Those who knew how to protect self from sexually transmitted infections were 28.3%. As forceful as these data are, especially the ones obtained from Calabar, the situation is confounded by the poor access to healthcare for this population due to the absence of medically-trained Sign Language Interpreters in our hospitals, poverty among deaf people, lack of deaf-cultural competence among doctors, and socio-cultural factors. There’s urgent need for multisectoral targeted intervention for this population.
Ibidolapo Ijarotimi, State Specialist Hospital

**Abstract Id:** 211

**Availability and use of Infection Prevention and Control facilities among Health Care Workers during Lassa Fever outbreak in Ondo state Nigeria, 2017.**

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**Background:** Hospital-acquired infections of Lassa fever (LF) has been described in many West African countries. We assessed the availability of Infection Prevention and Control (IPC) facilities in the health centres (HCs) at the affected Local Government Areas (LGAs) during an ongoing LF outbreak in Ondo State, Nigeria.

**Methods:** We included all primary and secondary HCs and their healthcare workers (HCWs) in the purposively selected Ose and Owo LGAs. We collected data from respondents using self-administered questionnaires and used a checklist to assess the IPC facilities at the HCs. We generated frequencies and proportions and tested associations using odds ratios.

**Results:** One hundred and ninety HCWs from 59 HCs were surveyed. Of the HCs 34 (57.6%) were located in Owo LGA and 50 (84.7%) were primary HCs. All had soap for hand-washing, but 7 (11.9%) didn’t have water, all of which were primary facilities. Though 57 (96.6%) had wash-hand basin only 52 (88.1%) had water available. Two (3.4%) of the facilities didn’t have gloves. While 20 (33.9%) had chlorine solution available and 53 (89.8%) had sharps boxes, only 16 (27.1%) had an isolation room. No HC had complete basic IPC requirements. Among the respondents, 96 (50.5%) were Community Health Workers, 33 (17.4%) were registered nurses, 24 (12.6%) were auxiliary nurses or auxiliary trainee nurses and 1 (0.5%) was a doctor. Most, 144 (91.6%), routinely had gloves available for use, 79 (41.6%) routinely had facemask/shield and 71 (37.4%) routinely had full personal protective equipment. At the last patient contact, 151 (79.8%) washed their hands before the contact, 188 (98.9%) washed their hands after and 183 (96.2%) wore gloves. Only 86.3% routinely disposed all sharps into sharps-bin. Forty-four (23.2%), had been trained in IPC. While there was no association between availability of gloves and its use (OR: 0.21, 95%CI 0.04-1.17), those who have had a training in IPC were almost four time more likely to have used gloves at the last patient contact (OR: 3.64, 95%CI 1.21-19.40) and they were also about twice more likely to have washed their hands at the last patient contact (OR: 2.31, 95%CI 1.67-12.30).

**Conclusion:** Among these HCs that serve as point of first contact with possible LF cases in these endemic LGAs, none met the minimum standard for IPC thereby putting their staff at risk of Hospital-acquired LF among other infectious diseases. We conducted IPC training in each LGA and recommended to the State government that IPC committee to monitor and ensure standards for the whole state be constituted.
Trust matters: Patients' and Providers' perceptions of the role of trust in hypertension care in rural Tanzania

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Background: The growing burden of non-communicable diseases (NCDs) in low income African countries (LIA) is impacted by poor health care seeking, non-adherence to medication and poor continuation with hospital care. One of the potential entry points to addressing these challenges is improving patient trust in doctors. Research in high income contexts suggests the benefits of improving patient trust in doctors as increasing health care service uptake, adherence and return for hospital care. Nevertheless, limited evidence exists on the subject of patient trust in doctors in rural LIA. The objective of this study was to investigate whether trust matters to patients and doctors/providers within the context of hypertension care in rural Tanzania as a case study.

Methods: The research utilized qualitative approach. In-depth audio-taped interviews with patients and providers in both western care and traditional healing system were conducted in two predominantly rural districts of Tanzania. The interview transcripts were coded and analyzed thematically.

Results: A total of 36 patients and 8 providers were interviewed. There was agreement among patients and providers in both western and traditional healing systems that patient trust in doctors matters in rural Tanzania. Benefits of trust in doctors were cited by participants as extending beyond patients to doctors, hospitals and health sector. Trust in doctors was described to facilitate patient’s health care seeking choices, participation in care and disclosure, adherence practices, return for hospital care, reduced financial burden and relief, healing or cure. Trust in doctors was also described to increase doctor/provider’s societal reputation, work morale and income. Further, trust in doctors was described to increase hospitals and health sector’s societal reputation, income and may drive healthcare resource increment. Despite the benefits, disadvantages of patient trust were also mentioned. Some participants indicated that trust in doctors may increase patient’s vulnerability to malpractices when doctors misuse the trust vested in them. Also, trust was considered as potentially contributing to doctors’ behaviour changes such as excessive self-pride, faking being busy and sluggishness in care provision as well as increasing their work load.

Conclusion: Trust in patient-doctor relationship matters in rural Tanzania. Improving trust in the patient - doctor relationship may be one of the important lenses in addressing some of the challenges of NCDs response in rural Tanzania and other LIA countries. However, should interventions into patient trust be considered, it is recommended to embrace activities that cushions against its negative consequences to both patients and doctors.
Rubana Islam, University of New South Wales

Abstract Id: 424

Contracting out urban primary health care in Bangladesh: Influence of politics and power on provider performance

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Background:

Contracting-out (CO) health services to non-state providers is believed to improve cost-control, permit more organizational flexibility, and enable better management. It has demonstratedly increased coverage and affordability of healthcare and could be a potential strategy to achieve the Sustainable Development Goal of Universal Health Coverage (UHC). Over the last two decades, Bangladesh’s Ministry of Local Government (MoLG) has contracted-out NGOs (provider) to provide urban primary healthcare. Although a uniform and legally binding contract specifies all aspects of service provision, performance across NGOs has been inconsistent. This paper highlights the role of politics and power in shaping NGO performance in service delivery.

Methods:

In this qualitative case-study we conducted a desk-review and 42 in-depth interviews with past and present stakeholders working in the CO project. We adapted a framework to evaluate the impact of CO by Liu et al, focusing on four domains: intervention rationale, features of the contract, responses of purchasers and providers, and external context. Framework analysis was used to yield systematic insight on how these were influenced.

Results:

Politics and power affected NGO performance in many ways. While the MoLG oversaw the CO project, the Ministry of Health (MoH) provided clinic licenses. An antagonistic relationship between the two ministries postponed necessary licensures, resulting in NGO services being suspended in the initial project period, which later impacted overall performance. Similarly, as the MoH was responsible for providing family planning supplies to NGOs, the same relationship dynamic and lack of communication persistently delayed supply procurement. Only those NGO managers who had established personal networks within the MoH could expedite the process before they stocked-out. NGOs flexibility to hire staff was compromised by a highly centralized project management and a recruitment committee who supposedly prioritized their own candidates. In some highly politicized areas, local elites also influenced the recruitment process. This compromised service quality because of lower quality recruits. The locally influential also requested free services for people otherwise ineligible by NGO’s poverty ranking systems. This meant the NGOs had to subsidize these costs that affected their target revenue.

Conclusions:

The purported benefits of CO may not be wholly realized in settings where power dynamics are unbalanced and politics conspire against collaborative approaches. NGOs can minimize some effects through managerial inventiveness. However, Bangladesh and other similar LMICs need to rethink the utility of CO in reaching UHC if there is no effort to change the broader political context.
Walk Together: How Community Health Workers Support Women Seeking Menstrual Regulation Services in Bangladesh

Co-authors: Farzana Islam- BRAC James P Grant School of Public Health, BRAC University; Muhammad Riaz Hossain- BRAC James P Grant School of Public Health, BRAC University; Raafat Hassan- BRAC James P Grant School of Public Health, BRAC University; Malabika Sarker- BRAC James P Grant School of Public Health, BRAC University; Sabina Faiz Rashid- BRAC James P Grant School of Public Health, BRAC University

While abortion remains illegal except for saving a woman’s life, Menstrual Regulation (MR) is part of the health system in Bangladesh and defined as “an interim method to regulate menstrual cycle of a woman when menstruation is absent for a short duration”. Since 1979, Bangladesh Government allows trained healthcare providers including family welfare visitors and doctors to conduct MR procedures upto 10–12 weeks respectively after a woman’s last menstrual period by utilizing MR medication or manual vacuum aspiration. This short documentary film explores the role of close-to-community (CTC) providers in linking women who want to access MR services.

Bangladesh’s health system is famously pluralistic where both public and private sectors are providing MR services. The most accessible and trusted sources of healthcare, specially for sexual and reproductive health services for poor urban women, are informal health care providers. This includes drug sellers, village doctors, homeopaths, kabiraj, herbalists, traditional healers, and untrained traditional birth attendants/dai. The unauthorized MR services they offer raise challenges around the provision of timely information, coordination of care pathways and quality. Informal providers are usually the first point of contact even for those clients who subsequently access MR from formal providers.

The film explores how women’s choice of health providers are mediated by complex factors like availability, accessibility, relationships with formal and informal providers, expenses, perceived quality of care, issues of trust, respect, privacy and familiarity. Women who receive MR may experience stigma and shame at the community and family levels, and worry about their reputations. Stigma is more prevalent against women who have non-normative sexualities (ie, women who have extra-marital sex, sexually active single women, young working women, divorcees, widows, and older women who continue to have sex past an age deemed appropriate by mainstream society).

CTC providers can enable women to navigate challenges that they face in accessing safe and quality MR services. The documentary outlines how REACHOUT Bangladesh led by BRAC James P Grant School of Public Health, BRAC University worked with CTC providers and their supervisors using quality improvement methods to strengthen supervision and referral within the programmes of two local non-governmental organisations. It demonstrates both the vital role that community level health providers play and how they can be supported to perform more efficiently with strengthened links to the rest of the health system.
Anne Ithibu, Aidspan  
Abstract Id: 3655

**Challenges faced by countries in the use of data to guide decision making: an analysis of countries receiving Global Fund funding**

Co-authors: Anne Ithibu-Aidspan

**Background:** Accurate and reliable information is essential for decision-making processes within the health sector. A functional health information system allows for the generation, collection, analysis and use of the data collected.

Lack of quality data is a persistent problem faced by countries receiving Global Fund investments. The aim of the study is to explore challenges faced by countries in the collection, analysis and use of data to inform decision making within HIV, TB and malaria programs.

**Methods:** The study involved the review of country audit reports published by the Global Fund’s Office of the Inspector General (OIG) in 2017. All audits covered either part or the entire 2014 – 2016 grant implementation period. A total of 6 country audit reports were reviewed.

**Results:** In five of the six countries, a district health information system, mainly the DHIS2, had been introduced to improve the quality of routine data. However, challenges in the accuracy and timeliness of the data remained. Data inconsistencies were reported in more than half of the countries; for instance, in South Africa, data reported in primary records was different from data reported to the Global Fund, while in Mali data reported in the primary records differed with data contained in the monthly health facility reports. Other gaps include potential duplications, delays in reporting, and missing and incomplete primary records.

Deficiencies in data quality were mainly due to:

- Inadequate monitoring and evaluation guidance: three countries lacked a national framework to guide M&E activities or data quality control guidelines to guide quality assurance activities
- Missing data collection tools: two countries reported stock-outs of registers
- Existence of multiple non-integrated data systems such as the DHIS2, electronic medical records (EMR) and the Logistics Management Information Systems (LMIS) etc.
- Inadequate data quality assurance measures: data validation and quality reviews were rarely prioritized. When performed, most were limited to the central level. The OIG also reported inadequate staff training and supervision at the lower levels.

**Discussion and conclusions:** Despite attempts to put measures to improve the data quality in place, issues of data timeliness, accuracy and completeness often arise. With the support of the Global Fund and other partners, countries need to prioritize integration of existing data systems, development of monitoring and evaluation frameworks and guidelines, introduction of data quality control measures, and training of staff and supportive supervision at national, district and health facility levels.
Impact of Globalization on the Health of Pardhi Denotified Community of Selected Districts in Madhya Pradesh, India

Co-authors: Ashwini Sopanrao Jadhav-Jawaharlal Nehru University

Background:
As health is beyond biomedicine and determined by social, economic, political and environmental factors, globalization is a significant factor in influencing the health of the population. Pardhi community is the most marginalized social group in the society. They are hunters and food gatherers and nomadic community. There are very few studies carried out on their health status. Globalization certainly has an influence on their health, but this is also not documented yet. Therefore, this study was planned to understand their health issues in the context of globalization.

Methodology:
This is a retrospective study. For the study, qualitative research methods were used with techniques of in-depth interviews, life histories, informal group discussions, and observations. The convenient sampling method was used due to migration among respondents. Total forty in-depth interviews conducted and ten life histories were collected from respondent from the Pardhi Community. Twenty-five in-depth interviews conducted with various stakeholders such as academics, activists, community leaders and health services providers. Data were analyzed thematically. The study was carried out with due ethical considerations.

Results and Discussion:
The study shows that the traditional livelihood of this community is disturbed. After a ban on hunting, the community has been involved in the agricultural activities. But, at present, the respondents are facing difficulties in cultivating their fields due to a high cost of seeds and fertilizers. They are affected by environmental degradation. Due to the destruction of agriculture and related activities, migration has increased among them. Their working and living condition has worsened.

Due to lack of nutritious food, poor living and working condition, the burden of illness have increased among the population. Further, due to increased privatization, expenditure on illness has been increased. And at the end, their access to health care decreased due to unaffordable prices. The study indicated that the process of globalization and imposition of neoliberal policies has a detrimental effect on the health status of this community. To improve their health status and for their overall sustainable development, there is a need for good policies and development program which suggest that state need to provide more positive discrimination measures for them.

Key Words: Globalization, Health, Denotified, Nomadic, and Pardhi
A qualitative study of barriers to continuity of care for chronic disease patients accessing government healthcare in India

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Background: Government healthcare facilities are where many vulnerable patients in India and other low and middle-income countries (LMICs) access affordable treatment and increasing numbers are presenting with chronic non-communicable diseases (NCDs). Continuity of care is essential for effective chronic NCD management and there is currently a lack of LMIC-based research on this topic. Objectives: To explore health-system and patient-related barriers to continuity of care for chronic NCD patients accessing government healthcare in India. Methods: Design: Qualitative study comprising 46 semi-structured, individual interviews. Thematic analysis using the Framework Method with analyst triangulation. Setting: Data was collected from three primary health centres, one community health centre, and three hospitals in Himachal Pradesh and Kerala, India. Participants: 20 male (n=10) and female (n=10) chronic NCD patients and 26 male (n= 19) and female (n=7) healthcare professionals (HCPs). Purposive sampling was used to identify patients with chronic NCDs (Chronic Respiratory Disease, Cardiovascular Disease or Diabetes) and HCPs with at least 12 months professional experience. Results: For chronic NCD patients, three themes emerged: (1) reasons for visiting government hospitals; (2) HCP to patient communication; (3) attitudes regarding medical information. For HCPs, three themes emerged: (1) health-system factors; (2) handover practices; (3) attitudes regarding potential interventions. Both patients and HCPs recognised the resource constraints affecting government healthcare; many patients expressed preference for visiting secondary care hospitals rather than primary care due to better availability of services. Patient and HCP reports of healthcare communication evidenced a nonexistence of structured protocols and documents for care transitions. HCPs reported an absence of formal handover education in medical curriculums. Some patients recalled receiving hostile treatment from HCPs when struggling to understand information and those of lower socio-economic status felt that nutritional advice was not suitable for them due to a lack of available time and/or money. Both patients and HCPs positively considered the introduction of patient-held booklets to improve the organisation and transfer of medical documents. Conclusions: The absence of formal protocols and HCP education regarding healthcare information exchange were notable system-based barriers to continuity of NCD patient care. Patient preference for hospital visits was also burdening strained secondary care services. Vulnerable patients of lower education and socio-economic status appeared to be particularly adversely affected by limited consultation times and a lack of patient-centred care. The implementation of structured care transition guidelines and patient-held booklets may improve communicative deficits and overall integration between primary and secondary healthcare facilities in India.
Building a Case for Integrated Community Health Programs in Kenya

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Background: Countries across the globe often debate between adopting vertical or horizontal interventions and in spite of surmounting evidence that horizontally integrated programs develop a stronger health system, most governments still choose vertical programs because outcomes are tangible and these programs are largely donor-driven. Kenya recently declared Community Health Strategy as its flagship project under which per every 5000 people there will be one Community Health Development Unit acting as the first point of care for the community. However, much needs to be explored in order to understand how effective community health system can be implemented in a decentralized governance structure.

Objectives: The present work aims to develop a case for horizontal, integrated approaches to community health using Kenya as a case study. The study aims to identify key facilitators of a successful and sustainable community health system.

Methods: 15 in-depth interviews of 40-60 minutes were conducted to understand the context and gather perspectives on facilitators and barriers to implementing horizontally integrated programs in Kenya. The panoply of stakeholders interviewed were Kenya’s Ministry of Health, multilateral/bilateral organizations, county management team, Community Health Extension Workers (CHEWs), Community Health Workers (CHWs) and community members. Also, two NGOs having integrated community health program were selected and their level of integration within the health system was analyzed using a conceptual framework designed by Atun et al. 2009. Qualitative data were transcribed, coded and major themes were identified for the analysis.

Results: Kenya has realized the importance of having community health system but is facing difficulty in implementation due to lack of direction and focus of the County Governments. As a result, several independent integrated community health programs exist within the country each having a different level of integration within the National Health System. Key facilitators identified for successful horizontal integrated health programs were (i) Strong political will and commitment, (ii) having fixed stipend for CHWs, (iii) regular supervision and training, (iv) strong national referral system, (v) donor coordination by the county government, and (vi) innovative methods of financing like Community Based Health Financing and Income Generating Activities.

Conclusion: The horizontal integration of community health systems requires rethinking of how government leaders budget the system, engage with donors, and organize roles and responsibilities throughout the broader health system. The research will add value to the existing knowledge base on community health programs and will serve as a guiding piece for the policymakers.
The Effect of a Community Case Management Worker Model on Knowledge, OVC Support, and Vulnerability Outcomes

Abstract Id: 3119

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Background

Community volunteers have long been recognized as an important component of a health system to improve the health of vulnerable populations. The USAID-funded STEER project works to scale-up care and support services for orphans and vulnerable children (OVC) in Nigeria through the use of community members trained as Community Case Management Workers (CCMWs). CCMWs identify OVC household risks, provide or link caregivers and OVCs to appropriate services, and ultimately decrease OVC and caregiver vulnerability by graduating them from the STEER program. To enable community members to better identify and support OVC households, the STEER project developed a new CCMW model (training curriculum, introduction of a stipend, and routine supervision) to build on the basic skills and knowledge of CCMWs to provide high-quality services to OVC and their caregivers.

Methods

The Project conducted an evaluation to assess the effectiveness of the new model. A simple time series design was used to compare CCMWs’ performance, to assess the quality of CCMW support, and to compare OVC, caregiver, and household graduation rates before and after the introduction of the new model. Data analysis consisted of descriptive statistics, hierarchical regression, paired t-tests, MANOVA, and multivariate regression.

Results

Overall, the CCMWs (n=322) reported a high level of job satisfaction and a very high level of self-perceived improvement in technical knowledge, competencies, and the quality of services they offered (mean improvement score= 19.37/20) after the training. CCMW supervisors also reported improvements in CCMWs’ skills and service provision after the training. This information was triangulated with those receiving services; OVC caregivers reported high satisfaction (89%; n= 1,482 satisfied) with services provided from the CCMWs. In addition, they reported that the CCMWs provided respectful care (99%; n=1,648), clear explanations of support services, and appropriate linkages to care (99%, n=1,641). The OVC graduation rate increased by 2 percentage points at endline, which is statistically significant given the OVCs low graduation rates at baseline. The curriculum, paired with stipends, was associated with increase in OVC, caregiver, and household graduation rates, indicating households had reduced vulnerability following implementation.

Discussion

The findings suggest that the new STEER model helped fill skills gaps, as both CCMWs and their supervisors reported an increased ability of CCMW to identify needs and risk of OVC households. This suggests that this is a promising model for programs working with OVCs.
Sources of intrinsic and extrinsic motivation for community health workers in implementation of public health programmes in informal settlements of Mumbai, India: A qualitative study

Introduction: Community health workers (CHWs) came to play an important role in the health workforce post the Alma Ata Declaration and continue to be critical to the fulfillment of Millennium Development Goals. This study identifies sources of intrinsic and extrinsic motivations for work in community health workers operating in urban slums of Mumbai. These CHWs belong to the community they serve and are critical to delivering health services at the community level. Very few studies have explored in-depth the factors that help workers engage with the community and the role of the organization in facilitating this engagement in the context of urban India.

Methods: Community health workers engaged with Integrated Child Development Services, a program run by the government and three major NGOs working on maternal and child health issues and allied interventions in urban slums of Mumbai were purposively sampled for the study. Thirty-two purposively sampled health workers from urban informal settlements in Mumbai were interviewed at length and interview transcripts were analyzed using a framework approach.

Results: It emerged from the study that intrinsic factors dominated the motivation of sampled health workers. They carried with them a strong sense of altruism which had roots in their biographical experiences, quest for meaningfulness and a sense of growth in self. CHWs further appeared to internalize external factors like their relationship with the community, observation of change in the community as a result of work and close personal relationships with their peers and supervisors into their motivational core. We found that apart from remuneration, community acceptance and endorsement goes a long way in keeping these workers motivated.

Discussion: NGOs in the health space in India have struggled to lower attrition rates in the CHW cadre as well as to facilitate community ownership of primary care initiatives. Insights drawn from this study could be used to identify the locus of engagement and design programmes that derive community initiative, participation and ownership.
Kehinde Jimoh, Systemone
Abstract Id: 4028

Cost-effective digital reporting system improves healthcare responses to drug resistant (DR)-TB in Nigeria

Co-authors: Kehinde Agbaiyero Jimoh-Systemone; Chris Macek-Systemone

Background: Nigeria, ranked as the 3rd highest TB-burden and 11th DR-TB burden country in the world. Problem stems from the location of GeneXpert MTB/RIF machines to diagnosis DR-TB at multiple clinical sites spread across a country of over 160 million, continued reliance on paper records and slow data transit systems, resulting in lack of timely quality data to guide resource allocation.

Methods: SystemOne developed an innovative mobile-based solution that sends GeneXpert diagnostic results to key health system actors instantly to enable quick enrollment of newly diagnosed patients in a DR-TB treatment program. GxAlert is configured on GeneXpert systems by installing a modem from a local telecom that sends encrypted data sent to the secure web-based GxAlert database in real time. GxAlert is a rapid reporting system that networks the GeneXpert labs with the capability to send diagnostic test results out to national programs, supervisors, clinicians and patients via SMS text, email, and web dashboard or by connecting into existing M&E, patient record, or case management tools already in use. The system then sends the results in a SMS alert to program decision makers at the state and national TB program, shortening the new-case reporting period from months to seconds.

Results: The proportion of DR-TB patients enrolled for treatment based on GxAlert messages received from 35 GeneXpert facilities jumped to 85% in March, 2015 from only 50% enrolled in April 2014. SMS or text message alerts speed treatment initiation. Weekly reports of all new TB+ cases are both emailed and sent by SMS to local health officials to ensure better connection between diagnosis, enrollment and treatment. GxAlert has demonstrated its potential to strengthen surveillance of DR-TB, TB in children and the HIV infected, speeding response and improving programmatic decision in over 350 labs through the National TB Program (NTP), reporting tens of thousands of test results making for faster enrollment of patients in treatment programs.

Conclusion: The use of GxAlert SMS notification of GeneXpert testing suggests a scalable model for sustainability: Lesson learned include: Installation is done once and locally. Technology is kept simple as local telecom modems are readily available and affordable for GxAlert connectivity. Additional challenges encountered during the scale up included traveling around different states in Nigeria for the installation during the insecurity and insurgency in some part of the country which required engaging and trained installers from that region and hired security armed guards to accompany them.
Can Women Participatory Groups Improve Use of Antenatal Care Services: Lessons from Innovating for Maternal and Child Health in Africa Programme in Southern Tanzania

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Background:

Antenatal care (ANC) services provided by a trained health care provider are important for monitoring the pregnancy, thereby reducing potential risks for the mother and child during pregnancy and delivery. The World Health Organization (WHO) and the Tanzanian Ministry of Health's ANC guidelines recommend at least four visits for uncomplicated pregnancies with the first visit starting before 12 weeks of gestation. However, the vast majority of women in sub-Saharan Africa start antenatal care considerably late. The recent Tanzania Demographic and Health Survey showed that though over 90% of pregnant women attend ANC at least once, only 51% make four or more visits during their entire pregnancy, and only 24% of women made their first ANC attendance before the fourth month of pregnancy. This presentation reports on strategies which were used to promote early uptake of ANC services in Southern Tanzania.

Methods: As part of the Innovating for Maternal and Child Health in Africa (IMCHA) programme, Women Participatory Action Groups (WPAGs) were formed in 20 villages in two rural districts in Southern Tanzania. The WPAGs were facilitated to identify barriers to early uptake of ANC services in their community, design and implement community-based strategies to promote early initiation of ANC attendance. These strategies were presented to men and later validated during the stakeholders’ meetings convened in each community.

Results: The most common strategies that were designed and implemented included: WPAGs to provide education to the community through public meetings, introduction of local by-law for couples who delayed ANC attendance, and sensitizing community members to join Community Health Fund, WPAGs and community health workers making follow-up to pregnant women at their household, and formation of male champion groups in the villages to promote male engagement. While these strategies were reported to increase early utilization of ANC service by pregnant women, several unintended consequences were reported.

Conclusion: We conclude that programmes designed to promote early use of maternal and child health services should be designed carefully taking in consideration the ingrained traditional gender roles and norms in the community. Stakeholders, including male partners, should be actively engaged in designing and implementation of the strategies.
Expresiones de angustia emocional en indígenas Mayas de México que padecen diabetes tipo 2

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Objetivo. Documentar cómo indígenas Mayas de México con complicaciones por diabetes tipo 2 expresan culturalmente la angustia emocional derivada de la enfermedad, así como los recursos sociales y de salud con los que cuentan para hacerle frente.

Antecedentes. En el campo de la Antropología Médica, el concepto de “idioms of distress” se refiere a las expresiones legas de las personas para expresar su malestar, frecuentemente es referido como: “nervios, angustia, miedo”. Desde la biomedicina estas expresiones se analizan con el concepto de: estrés. El punto a problematizar en esta presentación, está en cómo cada persona adapta el hecho estresor a su curso de vida y qué hace con ello. El estresor puede ser positivo o negativo. Positivo si representa una oportunidad para “avanzar” en su vida. Negativo si no se cuenta con los recursos necesarios para hacer frente a la situación. Cuando no hay apoyo, familiar, comunitario, de atención médica, los síntomas estresores devienen en enfermedad mental, comúnmente se manifiesta en diferentes tipos de depresión. Entonces ¿Qué elementos personales hacen que se tome “positivamente” el hecho y se le haga frente? ¿Con qué recursos sociales cuentan, incluidos los proveedores de servicios de salud?

Métodos. Investigación de corte cualitativo. Derivado de un estudio que duró varios años y contempló diferentes objetivos, se realizó una submuestra con “30 casos paradigmáticos”, seleccionados por tener algún tipo de complicación por la enfermedad: ceguera, daño renal, amputación de extremidades. Se realizaron entrevistas en profundidad y registros etnográficos de las comunidades. Se analizaron en Atlas ti, y manualmente.

Resultados. Las narraciones de indígenas que han sido amputados por complicaciones de la diabetes son narraciones de trauma y resistencia. El trauma deviene en la discapacidad que representa la amputación para su vida diaria, lo cual genera no sólo más sufrimiento emocional y social, sino también consecuencias para la subsistencia económica debido a la imposibilidad para seguir trabajando. Al depender de la familia, hay un reposicionamiento en el lugar que ocupa a partir de que ya no se es proveedor ni se puede ayudar en las tareas cotidianas (en el caso de las mujeres).

Conclusiones. La evidencia que se presenta debe ser considerada por el Sistema de salud para reorientar las acciones en el primer nivel de atención, ya que la atención a la salud mental está ausente.
Family Planning as a Multisectoral Intervention: Modelling the Impact of Family Planning across the Sustainable Development Goals in African Countries

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Background: With 17 goals, 169 targets, and 232 indicators, the Sustainable Development Goals (SDGs) pose a challenge for in-country operationalization. Although the interconnectedness of various SDGs is theoretically known, concrete specifics about these relationships are inadequately modelled. Information about the interrelatedness of SDGs should enable more targeted country-level advocacy and action. In this context, family planning (FP) (included in the health and gender SDGs) stands out as a cost-effective intervention that can benefit other sectors. Quantifying this information is useful for countries given limited funding and the need to prioritize cost-effective interventions.

Methods: The USAID-funded Health Policy Plus project developed an FP-SDGs Model, enabling users to simulate the effects of FP on various SDG indicators. The FP-SDGs Model was used to project the effects of FP—through its impact on demography—on 12 SDG indicators by 2030 and 2050. Model outcomes include poverty, food security, maternal/child health, education, water/sanitation services, income, child labor, and more. The FP-SDGs Model is based on statistical relationships linking response variables—SDG indicators—to predictors, guided by a literature review.

The model was applied in Malawi—with government stakeholders—and via a desk-based analysis for the nine West African Ouagadougou Partnership countries. For the analyses, we set future scenarios (expected/target values) for FP, education, governance, economic growth, and agriculture variables, based on existing data and country aspirations.

Results: Model results identify ways that SDGs are inter-related, with a focus on how an FP-related SDG indicator affects SDG indicators across sectors, and results specify the potential gains of different country prioritization strategies.

For example, results indicate that if Malawi reaches FP/socioeconomic development goals by 2050, it could reduce the prevalence of food insecurity by 51%, increase the percentage of primary-school children achieving reading proficiency by 25%, and decrease the urban population living in slums by 88% (compared to a scenario where Malawi does not meet FP goals). Results also indicate how FP alone, compared to specific socioeconomic development improvements (e.g., education quality), can influence these SDG indicators.

Discussion: Exploring the interconnectedness of SDGs supports the case for multisectoral investments to accelerate progress. Countries will be better positioned to achieve the SDGs if decision-makers across sectors prioritize FP, emphasizing coordination across ministries to promote collaboration at policy, funding, programmatic, and community levels. Additionally, researchers may consider developing models to explore the relationship between other SDGs.
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Abstract Id: 2804

Comment la connaissance scientifique informe le processus politique? Le cas de la politique nationale de protection sociale du Burkina Faso.

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Le gouvernement du Burkina Faso s’était engagé en 2009 dans un processus qui a abouti à l’adoption une Politique Nationale de Protection Sociale (PNPS) en 2012. La présente proposition vise à présenter les résultats préliminaires d’une recherche empirique sur le cheminement des résultats de recherche/connaissances dans le processus d’emergence et de formulation de la PNPS.


Formulation : La note de cadrage qui a orienté le contenu de la politique reprend les concepts, et les stratégies des entrepreneurs politiques. Un faible soutien ou volonté politique se traduisant par la faible implication des décideurs/fonctionnaires de haut niveau dans le processus a été constaté. Les acteurs n’ont pas fait des choix en fonction des connaissances sur ce qui fonctionne dans le contexte burkinabé. Ils ont compilé l’existant, puis intégré des stratégies qui peuvent intéresser les entrepreneurs politiques (logique de capatement de ressources financières).

Les connaissances utilisées dans le processus d’émergence vont au-delà de la recherche académique. Le contexte politique a favorisé la réceptivité des acteurs à se servir de la connaissance pour comprendre et problématiser le déficit de protection sociale. En revanche, la formulation a été orientée par les intérêts des acteurs locaux, les idées et cadres conceptuelles des acteurs internationaux sans une réflexion contextuelle. La volonté politique pour résoudre un problème est nécessaire pour favoriser la prise en compte de connaissance dans la formulation des politiques.
Noel Kalanga, University of Malawi, College of Medicine
Abstract Id: 3934

Redesigning Health Systems to tackle the Double Burden of Diseases: The Integrated Chronic Care Clinic in rural Malawi

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Background

Malawi is committed to ongoing expansion of access for HIV and the UNAIDS 90-90-90 targets, and over half of the country’s health care funding is earmarked for HIV, with less than 1% allocated for NCDs. Given this setting, the development of innovative and efficient models of care delivery is increasingly necessary. In an effort to maximize efficiency, leverage the robust HIV platform, and rapidly decentralize access to NCD care, PIH and the MOH instituted the Integrated Chronic Care Clinic (IC3) in 2015. The IC3 clinic utilizes the preexisting HIV clinics to provide screening, counseling, treatment and follow-up of common NCDs in the district. The clinic, available free-of-charge at each of the district’s 14 health facilities, provides longitudinal care for patients with HIV and NCDs, allowing for a single visit for all of a patient’s conditions. After two years of implementation, there is need to evaluate this clinic in order to draw out implementation lessons. It is important to ensure that the program achieves acceptable clinical outcomes, that patients and health workers are satisfied with the delivery of care and that the cost of implementation is not exorbitant.

Specific objectives

To describe key clinical outcomes for the patients at integrated HIV/NCD care clinic To explore patients’ and providers’ satisfaction with the integrated HIV/NCD care To determine the cost of delivering an integrated HIV/NCD care clinic and its cost effectiveness

Methodology

For patient outcomes we will utilize routine demographic, clinical, and programmatic data and evaluate 12-month survival rates and retention in care among all IC3 patients. Using multivariate logistic regression, we will compare these two outcomes for HIV and NCD clients enrolled before and after the initiation of IC3. The study will assess patients’ satisfaction by conducting descriptive statistics from the patient satisfaction survey data. Costs for IC3 will be determined by an activity-based costing approach. This estimate of annualized programmatic financial and economic costs, combined with patient retention and survival, will also allow evaluation of cost-effectiveness.

Significance

By proposing an evaluation of a unique integrated service delivery platform, this study could contribute valuable knowledge for policy makers, funders, and implementers. Furthermore, the positioning of the clinic in an impoverished and rural area facing this dual burden of HIV and NCDs allows for an evaluation in a health system under tremendous constraints where maximizing efficiency is critical. The research stands to inform nationwide approaches in policy and care delivery systems.
Referral Up-take Experiences of MR Clients in Dhaka, Bangladesh: Exploring Complex Decision-making Pathways and Implication of Women-centered Services

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Introduction: In Bangladesh, menstrual regulation (MR) services (legal procedure to safely establish non-pregnancy within 6-12 weeks after a missed period) are provided by both government and private sectors. Quality MR services are still inaccessible to poor women due to information gaps about service availability and poor referral mechanisms from community to clinics. This paper explores decision-making processes of poor women in MR referral uptake and experiences of close-to-community (CTC) providers during referral.

Method: This mixed-method study was part of a multi-country implementation research ‘REACHOUT’ and implemented in two non-governmental organizations authorized for MR services. The project implemented facilitative referral training for formal (CTC providers of partner organizations) and informal CTCs (enlisted drug-sellers, homeopath doctors, traditional birth attendants and community volunteers); and introduced revised referral cards. Data were collected from MR clients, formal and informal CTCs from one urban and one peri-urban slum in Dhaka.

Results: The study revealed women’s decisions of having MR services were shaped by economic conditions, social unacceptability of their age at pregnancy, and family relationships. Financial dependency and social condemnation due to stigma and religious views influenced whether and with whom women would share their MR needs. Availability of over-the-counter MR medication, proximity of health facilities and service cost were barriers experienced by CTCs in providing quality MR services. Existence of pluralistic health system allows both formal and informal CTCs to refer MR clients; however, referral uptake was dependent on trustworthiness and acceptability of those who give referrals. Therefore, informal providers became the main actors in the referral process.

Before, traditional referral systems and unstructured referral cards enabled untrained informal providers to refer women to clandestine operators and private clinics unauthorized for MR. They often performed MR procedure themselves for financial interest. After receiving referral training, CTCs reported increased knowledge, confidence, and improvement in their relationship with formal and informal providers. This influenced timely referral uptake from authorized MR clinics and encouraged informal providers to refer clients to safer places. Revised referral cards helped CTCs track clients before and after service uptake and direct them to designated clinics. Referral uptake increased from 22.8% to 34.3%. Referral cards assisted tracking 9.9% of clients which did not exist before.

Conclusion: In a pluralistic health system, ability to provide accessible safe MR services can be made possible with capacity building of service providers, greater focus on client needs, and strong referral systems from community to clinic.
Too afraid to go: Fears of dignity violations as reasons for non-use of maternal health services in South Sudan.

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Background: South Sudan has one of the worst health and maternal health situations in the world. Across South Sudan, while maternal health services at the primary care level are not well developed, even where they exist, many women do not use them. Developing location specific understanding of what hinders women from using services is key to developing and implementing locally appropriate public health interventions.

Methods: A qualitative study was conducted to gain insight into what hinders women from using maternal health services. Focus group discussions (5) and interviews (44) were conducted with purposefully selected community members and health personnel. A thematic analysis was done to identify key themes.

Results: While accessibility, affordability, and perceptions (need and quality of care) related barriers to the use of maternal health services exist and are important, women’s decisions to use services are also shaped by a variety of social fears. Societal interactions entailed in the process of going to a health facility, interactions with other people, particularly other women on the facility premises, and the care encounters with health workers, are moments where women are afraid of experiencing dignity violations. Women’s decisions to step out of their homes to seek maternal health care are the results of a complex trade-off they make or are willing to make between potential threats to their dignity in the various social spaces they need to traverse in the process of seeking care, their views on ownership of and responsibility for the unborn, and the benefits they ascribe to the care available to them.

Conclusions: Geographical accessibility, affordability, and perceptions related barriers to the use of maternal health services in South Sudan remain; they need to be addressed. Explicit attention also needs to be paid to address social accessibility related barriers; among others, to identify, address and allay the various social fears and fears of dignity violations that may hold women back from using services. Health services should work towards transforming health facilities into social spaces where all women’s and citizen’s dignity is protected and upheld.
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Abstract Id: 3352

Korean Civil Registration and Vital Statistics and Advisory Services Analytics Unique Identification Number Systems for Universal Health Coverage: A Case Study

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Background
An effective CRVS system is crucial to accurate planning and monitoring of programs in several sectors, including universal healthcare coverage. Robust CRVS systems contribute to achieving the sustainable development goals (SDGs) to end poverty and to ensuring all-inclusive prosperity. The objective of this study is to develop a comprehensive case study on the ways how the Korea Resident Registration System and Health Information System facilitate the achievement of universal healthcare coverage in Korea.

Methods
We discuss the merits and limitations of using CRVS system in Universal Healthcare Coverage (UHC) achieving of South Korea. A systematic review was conducted for this study. We illustrate case studies of how Korea UIN system is linked with the implementation of universal health coverage. The case study is composed of three main areas of health service provision, such as prevention, treatment and management, and healthcare data utilization.

Results
In Korea, the RR number assigned at the time of birth registration provides access to benefits through national health insurance from that point until death. Korean citizens are sent letters about free health check-ups, and they receive a variety of services tailored to each life stage. The ease of accessing and using existing and common administrative information has led to the merger of major databases across the government and the reform of related services. A nationwide administrative information sharing system has evolved, which incorporates the Public Information Sharing Center (PISC), a center that oversees standards for the use of common administrative information and plans for necessary systemic and institutional reforms.

Discussion
At present, there are no regulations for comprehensive privacy protections and the security of the protection of personal health data in Korea. an independent healthcare information protection law should be enacted soon regarding management of patient data, which has become copious because of computerization. Korea does not have a reliable and consistent system for protecting health data, and “non-identification of personal information” that might minimize the risk of data theft has become an important way to protect personal information. Non-identification of information is an important way to effectively protect personal information in the Big Data industry.

Conclusion
Non-identification still is limited because it does not eliminate the risk of re-identification. Therefore, it is necessary to develop appropriate substantive and technological devices and apparatuses for protecting personal information.
Exploring the links between informal payments and other failures in health care provision in African countries

Co-authors: Hyacinthe Kankeu Tchewonpi - University of York

Background
The issue of informal payments in the relationships between patients and health staff remains little studied/documented in African countries, whether from the perspective of petty corruption (emphasis on illegality) or undue user fees (emphasis on informality). The limited data available on this phenomenon shows that it is a real scourge in several countries. It is not only an additional financial barrier to accessing care for the poorest, but also an added problem on top of many other dysfunctions of health systems in several developing countries.

This study presents the evolution of the extent of informal payments in public health facilities of more than thirty African countries, and explores the possible explanations for their coexistence with other failures in health care provision.

Methods
We use data from Afrobarometer surveys and a series of bivariate analyses to assess the correlation between the magnitude of informal payments and that of other problems like doctors’ absenteeism, lack of medicines, and long waiting times.

Results
In Botswana and Mauritius, informal payments are almost non-existent, while they are a serious problem in Cameroon, Egypt, Guinea, Liberia, Morocco, Sierra Leone, Sudan, and Uganda. There is a general downward trend between 2011-2013 and 2014-2016, with the exception of a few countries. Moreover, the scale of the problem remains high in about 10 countries (≥20% people paid informal fees in public health facilities).

In 25 out of the 34 countries covered, more than half of the citizens reported having faced doctors’ absenteeism. Apart from Mauritius (20.2%), the lack of medicine was recurrent in all other countries (44.5% - 88.9%). Long waiting times in public health facilities were even more frequent (≥60% in all countries, except Mali). The bivariate analyses at the country level show highly significant correlations between the scale of these failures in health care provision and that of informal payments.

Discussion
These results can be interpreted in two ways: (i) the existence of informal payments is just one of the many health systems failures or (ii) it is a consequence of these dysfunctions.

The second interpretation is more frequent in the (economic) literature, the explanation being that actual or fictitious shortages of human/material resources (in face of patient needs) create incentives for patients to pay more (including informally) for the services they are seeking. However, it is not possible to conclude on the existence of a causal relationship and this question deserves further investigation.
Bringing it all together: A framework of Actions for UHC

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Background: The SDGs call for a rethink of health service delivery. The 17 goals are indivisible, with actions influencing each existing in other goals. Additionally, country health systems are facing unique routine and emergency health challenges arising from changing epidemiological, demographic, social, and environmental changes in the continent. A new way of designing, implementing and monitoring health service provision targeted at health stewards was therefore needed.

Methods: A review of the current health system design and challenges was carried out by independent teams. The results of this was presented to a technical forum of health stewards and donors from all countries of the region, who deliberated on the findings from an SDG perspective. Several recommendations arose, including the need to re-define health service priorities incorporating all SDG interventions influencing health; a specific focus on health security, resilience, health infrastructure and service responsiveness as unique regional needs; elaboration of health system performance measures avoiding verticalization of the building blocks; and a special emphasis on guidance for district implementation. In addition, the forum recognized the need to provide comprehensive guidance, while taking cognizance of the different nature of countries. A technical team of experts brought these recommendations together into a draft framework of actions that was reviewed by the independent program management committee made of country experts prior to discussion by Ministers of Health.

Results: The framework consolidates systems and services around a logical results chain that defines elements at each level from the SDG perspective – with the desired impact as attainment of the SDG 3 goal. Outcomes are the health and related service outcomes people deserve, structured around 6 UHC, and 4 other SDG intervention domains. Health system performance is defined around 4 elements of access, quality, system resilience and service demand. Finally, system investments are defined across 7 elements with a menu of actions for their attainment elaborated. For each element in framework, attributes are elaborated that define what it entails.

Implications: The framework presents countries and partners a logical approach to plan and monitor service delivery from an SDG perspective. Planning, and implementation processes will need re-designing to ensure SDG attainment is effected bottom up.

Key words: Universal Health Coverage, sustainable development
Sumudu Karunaratna, Post Graduate Institute of Medicine, Sri Lanka
Abstract Id: 2634

Analysis of policy impact: Compulsory Health Insurance for public sector employees in Sri Lanka

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Introduction: Health financing in Sri Lanka is predominantly through government funding (55%) and direct out of pocket expenditure (OOPE) (42%). Agrahara, a mandatory social health insurance (SHI) scheme was established in 1997 for public-sector employees with the intent of reducing OOPE. With an average family size of 3.9 this has the potential to benefit nearly 3 million people (13% of population).

Objective: To assess the impact of the SHI on service utilization and OOPE among a representative sample of employees in one district.

Methods: A cross-sectional study of a representative sample of public sector employees (n = 500) in one district of Sri Lanka was conducted using cluster sampling. Data was collected using an interviewer assisted self-administered questionnaire. Catastrophic health expenditure (CHE) is defined as OOPE more than 10% of total household income. Logistic regressions were used to identify the determinants of catastrophic OOPE due to out-patient care.

Results: The CHE due to utilizing out-patient care was 28.8% for a recall period of last 30 days. Private health providers were utilized nearly 4 times more (82%) for out-patient care needs than government providers (16%). Out of the total household expenditure on out-patient care, 91% of the expenditure had been for private providers, while only 9% had been for government providers. Being from the poorest income quintile showed significantly higher odds (OR = 8.5, P = 0.004) of facing catastrophe due to out-patient care than being from the highest income quintile. Having a household member over 60 years or a chronic disease was not significantly associated with CHE.

However, for inpatient care, government hospitals were preferred (79%) over private hospitals. Only 7% of the households faced CHE due to in-patient care. Although 80% of the total admissions were eligible to be claimed from the insurance scheme, only 38% had submitted a claim request. The two most common reasons for non-utilization of reimbursements were not being clear about (i)documents required and (ii)the terms and conditions of the policy.

Conclusions: The policy for SHI was implemented with benefits only for inpatient care, although there was 28.8% of CHE due to OOPE for outpatient care. To address the inequity in CHE, one option is to have benefits for outpatient care, without increasing the demand for additional private services.
Neema Kaseje, Global Initiative for Children's Surgery - Nicaragua
Abstract Id: 3812

**Defining global children's surgical needs to inform policy: results of a pediatric surgical assessment tool pilot in rural Nicaragua**

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**Background:**
Currently, there is no standardized tool for assessing health facilities' capacities to provide children's surgery. As countries with significant pediatric populations define their National Surgical Plans, our goal was to develop a standard tool for assessing health facilities' capacities to safely provide children's surgical care.

**Methods:**
We developed the Pediatric Surgical Assessment Tool (PSAT) based on the current World Health Organization (WHO) Surgical Assessment Tool already widely used but designed for adult populations. To make the PSAT comprehensive, we added elements from the Optimal Resources for Children's Surgery document developed by the Global Initiative for Children's Surgery. The piloting of the PSAT took place at a district hospital in rural Nicaragua. We evaluated the facility's infrastructure, equipment, workforce, surgical volume, use of the WHO surgical safety checklist, financing, information management, and research.

**Results:**
In 2017, the facility had 247 pediatric surgical admissions. There were 4 pediatric surgical beds but no pediatric or neonatal intensive care unit (ICU) beds. Pediatric surgical instruments were available; however consumables such as pediatric endotracheal tubes were limited and stockouts were common. There was 1 part time pediatric surgeon; and 1 anesthesiologist. During 2017, the total children's surgical volume was 197 for a pediatric population of 30'000. The most common procedures were appendectomies (emergently) and inguinal hernia repairs (electively). The WHO surgical safety checklist was used in 51-75% of cases. One hundred percent of patients had government sponsored health insurance coverage; with no out of pocket expenses related to accessing surgical care. Patient charts were paper based - and there was one ongoing children's surgical research project.

**Discussion/Conclusion:**
The piloted PSAT revealed adequate health insurance coverage and no out of pocket expenses related to accessing surgical care in rural Nicaragua. However, there were challenges in the availability of ICU care and surgical consumables. Furthermore, there were workforce challenges - particularly with regards to pediatric anesthesia providers. These challenges led to the low surgical volume relative to the pediatric population served and should be taken into account in government plans to achieve universal access to surgical care in Nicaragua.
Catherine Kathambara, IntraHealth International/Kenya  
Abstract Id: 997

Strengthening Kenya’s devolved health system: The role of inter-county technical working groups for human resources management

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Background: Devolution presents opportunities and challenges for health systems that can determine their contributions toward achieving universal health coverage and sustainable development goals. In 2013, Kenya’s health sector transitioned to a devolved government creating 47 county health departments to bring health services closer to the people. The transition occurred over six months instead of the planned three years. Counties were ill prepared and lacked required human resource systems, resulting in resistance by health workers and several episodes of industrial unrest.

Methods: The Ministry of Health and USAID-funded human resources for health (HRH) projects led by IntraHealth International established seven inter-county forums—based on Kenya’s commitment at the 2013 Third Global Forum on HRH—to address county-level HRH challenges, share experiences and best practices, and provide avenues for policy dialogue between national and county governments. To transform the HRH agenda into action, these inter-county forums constituted technical working groups (TWGs) by cluster (5-6 counties).

Cluster TWGs foster inter-county HRH coordination and collaboration, building synergy in addressing HRH challenges. TWGs are chaired by county departments of health with participation from county stakeholders and implementing partners. For sustainability, a county secretariat is responsible for hosting, coordinating, and managing the forum and TWG meetings. Meetings are held quarterly and rotate within cluster counties. TWGs develop action plans based on cluster and county HRH priorities, follow through on implementation, report back progress, and also communicate via social media (WhatsApp, Facebook).

Results: TWGs have been institutionalized in county HRH management and service delivery. Linkage to national government has facilitated consultation, collaboration, and consensus in addressing HRH issues, leading to knowledge exchange across interdependent departments and enhancing health system efficiency. A participatory approach to policy dialogue and implementation is now entrenched resulting in initiatives like cross-sharing of medical specialists between counties; development of over 25 policy guidelines; alignment of county strategies with Kenya’s health sector HRH strategy; and deployment of HR officers to support HRH management in 40 of 47 counties. Inter-county learning and support has catalyzed change and promoted harmonized understanding of policies across counties, implementation of HRH priorities including performance management toward quality service provision, avenues for employer-union engagement, and advocacy leading to over 15,000 additional health workers hired since devolution.

Conclusion: TWGs for HRH coordination are making strides in strengthening Kenya’s health system. They are an important vehicle to share and translate knowledge to improve the HRH policy environment, practices, and standards in the counties.
Jose Gutierrez, Abt Associates (Consulting Actuary)
Abstract Id: 3106

Protecting vulnerable populations with HIV in Vietnam: Applying actuarial techniques to inform the transition from Donor project funding to coverage under Social Health Insurance

Co-authors: Jose Gutierrez-Abt Associates; Eamon Kelly-Abt Associates (Consulting Actuary); Theodore M Hammett-Abt Associates; Nazzareno Todini-Abt Associates; Dam Lam-Abt Associates; Nguyen Thi Diu-Abt Associates

In developing countries, people living with HIV (PLHIV) are often doubly vulnerable as their incorporation into national health systems can be seen as overly costly. In the past the cost of ARV treatment for these persons has often been addressed through external project funding. As this project funding begins to decrease, there is a major challenge for governments in how or whether to maintain such financial protection for these vulnerable populations, from domestic resources. One critical way to inform such governments is to quantify the cost of covering treatment for these persons under their national health financing systems.

In Vietnam, as PEPFAR and the Global Fund reduce and ultimately end their support, there will be a shift in funding of treatment costs for PLHIV to other sources – in particular Social Health Insurance (SHI). USAID’s Health Finance and Governance Project implemented by Abt Associates worked with Vietnam Social Security to estimate the yearly financial cost to the SHI Fund of the curative treatment services for insured PLHIV.

One of the most challenging parts of the exercise was to quantify the implicit liability currently in the system and the possible behavioural changes of PLHIV after the transition from project funding to coverage under SHI. We addressed this challenge by blending detailed empirical service data, project field based experience, stakeholder input and advanced actuarial techniques to build an interactive financial model. We largely relied on applying quantitative techniques to large datasets which are currently being collected but are not being used in such a fashion. For example, for Opportunistic Infections we were able to extract service record data directly related to the relevant ICD’s and from there build a costing model on the frequency and cost of treatment of Opportunistic Infections for PLHIV.

The model produced baseline estimates and estimated changes of the likely “HIV liability” under different scenarios. It also identified the key areas of uncertainty around the liability and critical “policy levers” that policymakers have to influence the ultimate usage and costs of curative treatment for PLHIV under Social Health Insurance.

The quantification of the “HIV Liability” helped to inform governmental and external stakeholder discussions and “put a number” on the likely financial impact of absorbing the cost of treatment for PLHIV under Social Health Insurance. Without a quantification exercise such a stakeholder debate would be under-informed at best.
Strengthening health systems and mobilising communities to eliminate neglected tropical diseases; focus on lymphatic filariasis morbidity

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Lymphatic filariasis (LF) is a neglected tropical disease (NTD) targeted for global elimination. The most common clinical manifestations include limb lymphoedema and hydrocele, which affect 40 million people worldwide with chronic, painful, and disabling consequences. To address this major public health problem, the World Health Organization (WHO) launched the Global Programme to Eliminate LF (GPELF), which aims to interrupt transmission through mass drug administration (MDA) and to prevent suffering through morbidity management and disability prevention (MMDP), and are primarily implemented by community health workers and volunteers in endemic countries.

The National LF Elimination Programmes follow the WHO / GPELF strategy to reach the elimination targets with governmental and international donor support. Due to the chronic disabling nature of the LF clinical conditions, a long-term plan and integration of care into existing health systems is essential. National programmes are required to show that they have i) disease burden estimates ii) a minimum package of care to manage lymphoedema and hydrocele and iii) that these MMDP services should be of quality and available in all endemic districts. Since 2015, there has been significant support provided for LF MMDP through funds provided by the Department for International Development, UK Aid through the Centre for Neglected Tropical Diseases (CNTD), Liverpool School of Tropical Medicine, UK.

The aim of this paper is to highlight the successes and challenges of scaling up and integrating LF MMDP care and services into health systems across 12 countries in Africa and Asia, with specific focus on the wide range of capacity strengthening required at national, district and community level. Specifically, it outlines the process of how health workers and volunteers have been trained to search, report and provide care for patients. To date, more than 25,000 cases across 19 districts in 7 countries have been identified, more than 18,000 health workers have been trained in lymphoedema care and more than 18,000 hydrocele surgeries conducted by local doctors in hospitals. Further, innovative mobile (m-health) and Geographic Information System (GIS) tools have been used to optimise the data reporting process, develop disease burden maps and conduct quality of life surveys that evidence the impact of health system strengthening and community mobilisation and their role in LF elimination.
Louise Kengne, Research for Development International \ University of Yaounde I
Abstract Id: 3837

Engaging the private health sector in sharing health-related data for district decision-making as a critical step toward Universal health coverage: Evidence from qualitative study, Cameroon

Co-authors: Louise Kengne-Research for Development International \ University of Yaounde I; Bertrand Feudjo-University of Yaounde; Junior Ndemkeh-University of Bamenda; Christelle Mbom-Research for Development International

Context: Health information systems are an important planning and monitoring tool for public health services, but may lack information from the private health sector. There is a growing consensus that countries in Sub-Saharan Africa would not reach the Universal Health Coverage (UHC) without a robust health information system. In this article, we assessed the extent of maternal, newborn and child health (MNCH)-related data sharing between the private and public sectors in two districts in the North-west region, Cameroon; analysed barriers to data sharing; and identified key inputs required for data sharing.

Methods: Between March 2016 and August 2017, we conducted 86 key informant interviews at central, regional and district levels. Respondents were stakeholders from national, state and district health departments, professional associations, non-governmental programmes and private commercial health facilities with 2100 beds. Qualitative data were analysed using a framework based on a priori and emerging themes.

Results: Private facilities registered for ultrasounds and abortions submitted standardized records on these services, which is compulsory under Cameroonian laws. Data sharing for other services was weak, but most facilities maintained basic records related to institutional deliveries and newborns. Public health facilities in blocks collected these data from a few private facilities using different methods. The major barriers to data sharing included the public sector’s non-standardized data collection and utilization systems for MNCH and lack of communication and follow up with private facilities. Private facilities feared information disclosure and the additional burden of reporting, but were willing to share data if asked officially, provided the process was simple and they were assured of confidentiality. Unregistered facilities, managed by providers without a biomedical qualification, also conducted institutional deliveries, but were outside any reporting loops.

Conclusion: Our findings suggest that even without legislation, the public sector could set up an effective MNCH data sharing strategy with private registered facilities by developing a standardized and simple system with consistent communication and follow up.
A new tool for post-disaster damage assessment and resilience planning of health facilities in Nepal

Co-authors: Sunil Khadka-Nepal Health Sector Support Programme; Mahendra Prasad Shrestha-District Public Health Office; Prashan Lal Shrestha-Nepal Health Sector Support Programme

Purpose

The 7.8-magnitude Gorkha earthquake in April 2015 killed 9,000 people, injured thousands more and destroyed or damaged 629 health facilities. In rescue, recovery and reconstruction situations government, donors and international agencies need accurate information to plan and programme activities. This session will describe how the DFID-funded Nepal Health System Support Programme (NHSSP) developed and applied an improved method of capturing detailed on-site information on damaged buildings.

This system – the Post Disaster Detailed Engineering Assessment (PDDEA) – collected more detailed data and enabled more accurate cost and damage forecasts than previous government and other donor-validated assessments.

Focus

The main features of the PDDEA were:

Electronic data capture in the field using tablets, cloud storage and Geographical Information System (GIS) information capture that proved more accurate than comparable paper-based systems. The collection of detailed on-site information on damage status of all buildings in each health facility, rather than a general facility categorisation. The deployment of teams of young, qualified engineers to conduct the assessments, ensuring reliable data, damage and crack assessment rather than health service officials and other public administrators.

The PDDEA was developed in September 2015 using open-source software by NHSSP with technical support from DFID and GIZ. The assessment was linked to the health ministry’s Infrastructure Information System to map hardest-hit areas, and priorities for intervention – this was used to coordinate and direct external development partners to provide facilities and support in line with government priorities. It formed the basis for the government’s health sector reconstruction programme.

While the PDDEA proved its worth in this post-disaster situation, the approach also lends itself to surveying the built fabric and condition of health facilities to mainstream disaster reduction and resilience planning into capital and maintenance programmes.

Significance for the field-building dimension: The PDDEA tool is simple, cost-effective and can be readily adapted by other organizations. It can be used in post-disaster or resilience planning situations.

Target audience

This session will be of particular interest to government health service managers, specialists working on disaster response, planning and mitigation programmes, construction professionals and project managers.
Health and Wellbeing as one of the Sustainable Development Goals comprises achieving universal health coverage (UHC), meaning that all people must have access to healthcare when needed at an affordable price. Several UHC indices have been developed in recent years. Some indices appear to be complicated and difficult for practitioners to apply in empirical analyses. This research presents a transparent and exact formula and develops a systematic procedure for calculating a UHC index in a spreadsheet without using advanced statistical or mathematical techniques. The research has three specific objectives: to calculate a UHC index using an Excel spreadsheet; to decompose the index values into socioeconomic groups in the same spreadsheet and finally to validate the index.

Data from the World Bank from 6 Asian and 15 African countries gave opportunity to calculate a UHC index based on seven health services across five socioeconomic quintiles. Among Asian countries UHC index ranged between 25.6% (Nepal) and 57.2% (Kazakhstan) and in African between 8.9% (Chad) and 54.3% (Zambia). Decomposition of our UHC index generally showed a higher contribution of richer socioeconomic groups than the poorer ones. The highest contributions of the richest quintile to UHC index values were observed in Nepal (28.6%) of Asia and in Ethiopia (35.5%) of Africa. Both countries experienced low UHC index, e.g. 25.6% and 14.4% respectively. The countries with a high UHC index, like Kazakhstan (UHC index 57.2%) and Zambia (UHC index 54.3%) had a much more equitable distribution of contribution to UHC index across socioeconomic groups. There is a strong negative correlation (87.4%, p = 0.000) between UHC index and concentration index. Using an econometric model, we estimated the impact of OOP payments on UHC, which showed that a one percent increase in OOP payments reduced UHC by 2.6 percent. Our UHC index was thus validated in a clear negative relationship between out of pocket (OOP) payments as a percentage of total health expenditure and UHC status of the reported countries.

This transparent approach of calculating UHC index and its decomposition show the degree of sensitivity to any changes (deterioration or improvement) in population and health service coverage as well as in the share of the population with financial risk protection. It, therefore, should be useful for UHC practitioners and stakeholders as well as policy-makers without advanced knowledge in mathematics and statistics.
Sheraz Khan, Inclusive Community, Universal Healthcare (I.C.U Healthcare)
Abstract Id: 2956

Developing three-Dimensional Narrative to counter Polio Vaccine Refusal in Charsadda, an Ideologue district for Pashtun belt (Pakistan).

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Background
Being an endemic country, polio eradication in Pakistan is a global challenge. Due to community’s mistrust, polio eradication is no more a simple medical problem but a multidimensional imbroglio. To develop a rich counter-narrative for vaccine refusals, a detailed ethnographic study was conducted in Charsadda. Charsadda is the hub of Pashtun nationalist and religious ideologies. Study objectives were to “explore the religious, ethnic and cultural roots of polio vaccines refusals” and to “explore the gaps in current community trust building measures”.

Methods and Material
We used qualitative research techniques. We conducted 43 in-depth interviews with stakeholders and analyzed relevant audio-visual material. We conducted content analysis on interview transcripts and discourse analysis on audiovisual material. Initially, open coding and then thematic analysis was performed.

Findings
While exploring reasons for polio vaccine refusals, we had 143 codes under four themes. Grounded codes under the ethnicity theme were: (i) systemic conspiracy theories, (ii) trust deficit (iii) political refusals, (iv) the “enemy outside”, and (v) the “enemy within”. Codes under the cultural theme included: (i) geography and politics, (ii) hand of Government, (iii) poverty/ insecurity, and (iv) unmet healthcare needs. Codes under the pseudo-religious refusals were: (i) blind trust in clerics, (ii) benign pseudo religious refusals, and (ii) malignant pseudo religious refusals.

Discussion and Recommendations
At the heart of refusals are conspiracy theories. Anti-state elements like Tehrek-i-Taliban Pakistan are touting the conspiracy theories, especially on social media. Pseudo-religious refusals are becoming more malignant while ethnic refusals are becoming more resistant. These trends at community level are invoking administrative use of force. Certain terminologies used by the program for vaccine refusals are misleading, as it shifts the onus of system failure towards community. The demise of cultural institutions like Hujra are creating persuasion vacuum, which is being filled by venemous social media.

Government should address the apprehensions of community in three dimensions. Addressing the religious dimension of refusals, it should (i) correct the misleading nomenclature, (ii) mainstream the religious clout via engaging the hardliners hitherto neglected. On the ethnic front, the Government should (i) put the conspiracy theories to rest, (ii) develop the moral and legal narrative for use of force, and (iii) balance the arbitrary use of force with judicious restraint. Considering the demise of culture hujra, Government should (i) correct the information-action asynchrony, (ii) utilize the dense social media and cellular network, and (iii) assign bigger say for community health workers.
Applying Equity Focussed Apporach for making Health Systems Responsive towards Reproductive Health of marginalized groups in India: a step twowards achieving SDGs.

Co-authors: Tina Khanna-International Institute of Population Sciences

Background: Social inequities in early child bearing continue to persist especially among young tribal populations in India. Young tribal girls face greater health risks as a result of early marriage, early and frequent pregnancies. Despite progress in improving access to reproductive health care, health services are least accessed by tribal women. Despite large disparities in health, little research has been done to identify key challenges to equity in service delivery of reproductive health programmes and determinants associated with contraceptive use among tribals and non-tribals in rural India.

Methods: This study utilized mixed method approach: a survey of young married women and men (n=273) was conducted in rural Rajasthan and Madhya Pradesh. Qualitative interviews were conducted with community health workers (ASHA and AWW). Logistic regression and deductive content analysis was used for analysis.

Finding: Current use of any contraceptive method was found lowest among tribals (p<0.001). The knowledge about use of contraception and pregnancy was much less among tribal young people. Study findings also reveal stark disparities in healthcare services available to remote tribal regions compared to non-tribals. Tribal face continued geographical and cultural marginalization and slip through the health system safety net. The study found limited interface of health care providers with tribals in providing family planning counselling and services. The qualitative interviews with health care workers reveal that they did not reach to tribal communities as they lived on periphery, far from health centre. Further, they had indifferent attitude towards health issues of tribals. Tribal women reported poor experiences due to insensitive and discriminatory behaviour from health workers. In addition to this they are deprived of social protection measures, they reported low education/exposure and poor economic conditions.

Conclusion: This paper overall reaffirms that health systems efforts to be directed towards tribal populations the most. The study provides evidence of how health systems can be strengthened and energized to improve health equity, by adopting few measures. These include, first, bringing health services closer to remote populations through outreach mobile camps for better health care delivery and uptake on family planning services. Second, to improve the motivation and performance of frontline workers for working in vulnerable geographical pockets. Lastly to forge cross-sectoral support beyond health sector (education and livelihood) to reduce social vulnerabilities and improve health access. The findings stress the need for equity- health system reforms that prioritize reproductive health care tailored to needs of the underserved tribal populations.
Ramadhan Kirunda, FHI360
Abstract Id: 3891

A process evaluation of the collaborative improvement of a community-based family planning district learning site in Uganda

Co-authors: Ramadhan Kirunda-FHI360; Christine Kim-Chapel-hill

Background:
As a high impact practice, Community Based Family Planning directly contributes to addressing the goal of universal access to reproductive health in Uganda with the country’s total unmet need for FP still high at 23.8%. Evaluations of quality improvement initiatives in Sub-Saharan Africa are limited, with examples from Uganda and Tanzania on maternal and newborn healthcare and northern Ghana on maternal and child health. However, there is no QI documentation in the published literature or in the Ugandan national health strategies of quality improvement (QI) initiatives targeting VHTs and CBFP service delivery.

Methods:
The evaluation took a descriptive mixed methods process evaluation design including the following components: desk review of program documents; extraction of service administrative data (program data and health management information system data [HMIS]); and, FGDs and IDI. We collected data from two program districts, Busia and Oyam districts. The target populations for this study were the QI teams, specifically the core members composing of VHTs and midwives, and their clients. QI teams were composed of midwives, district health managers, health center in-charges, and VHTs.

Clients were randomly selected men and women at least 18 years of age and couples recorded in the VHT register during the implementation period (June 2015-December 2016), and were selected for IDIs.

Results:
The key features of the collaborative improvement model were; the application of the PDSA, with a focus on change ideas, supervision and mentorship by midwives, monthly meetings, and data collection and use.

The most effective change ideas reported were: adequate counseling with job aids, home visits/ client follow-up, sensitization and mobilization, and male involvement activities, such as the use of male expert clients. Factors contributing to the maintenance and sustainability of QI collaborative was the inclusion of local leaders in the first learning session in Busia (trainings with guidance materials/job aids), and ensuring client confidentiality and trust.

Conclusions:
The process evaluation showed that despite its complexity, the collaborative improvement model should be considered as a feasible approach to improving the quality of community-based services. This evaluation identifies the essential elements for replication of the collaborative model to increase the uptake and continuation rate of FP services among women through the provision of high quality CBFP services by VHTs provision.
RETENTION IN CARE UNDER OPTION B+ FOR HIV INFECTED PREGNANT AND BREASTFEEDING WOMEN IN GOMBA DISTRICT, UGANDA

Co-authors: George Kiwanuka-Makerere University School of Public Health; Rhoda W Wanyenze-Makerere University School of Public Health; Noah Kiwanuka-Makerere University School of Public Health

Background: In Uganda, Option B+ implementation started in October 2012. The level of retention of women on Option B+ at the different time points across the elimination of mother to child transmission cascade is unknown. Additionally, retention based on health facility records is thought to under-estimate overall retention since several women self-transfer to other facilities. However, this phenomenon has not been explored. This study assessed retention-in-care among a 24-month cohort of pregnant and breastfeeding women on Option B+ in Uganda, using facility based data and integrated a follow-up to ascertain transfers to other facilities to fully account for retention.

Methods: A retrospective cohort, and a cross-sectional study, with mixed methods. Enrolled all women initiated on Option B+ from March 2013-March 2015. Health facility records were retrospectively reviewed for retention over a 24 months period. These women were tracked using phone or physical tracing for face-to-face and in-depth interviews. Data was analyzed with STATA 13. A descriptive analysis was performed to calculate the proportions of option B+ patients retained at health facility level and self-transfers. Rate of RIC was assessed using survival methods, the differences, using log rank test. Thematic analysis was done for qualitative data, using MAXQDA 12.

Results: Overall, 520 records were reviewed; mean age 26.4(SD=5.5), 289(55.6%) attended primary school, 53%(276/520) had not disclosed HIV status, 346(67.2%) started ART during pregnancy, 68(13.1%) while breastfeeding. Health facility retention was 60.2/1000pyo (95%CI:55.9,64.3) at 12 months and 46.3/1000pyo (95%CI:42.0,50.5) at 24 months. A total of 286(55%) women were tracked. Of the women initially categorized as non-retained at data abstraction, 43/118(32.8%) had self-transferred to another facility, increasing the 24 months retention from 46.3% at health facility level to 68%. Women <25 years were more likely to be non-retained with adj.HR 1.71(95%CI:1.28,2.30), no education had highest chance of non-retention, adj.HR 5.55(95%CI:3.11,9.92), and non-disclosure was significantly associated with non-retention, adj.HR 1.59(95%CI:1.16,2.19). Facilitators for Option B+ initiation and adherence were adequate counselling, disclosure, and the desire to stay alive and raise HIV-free children. Drug side effects, in-adequate counselling, stigma, and un-supportive spouse, were barriers to the initiation and adherence to lifelong ART.

Conclusion: Retention under Option B+ is under-estimated at health facility level. Predictors of non-retention are individual and system related.

Recommendations: Development of strategies to enhance disclosure, and targeting the uneducated, and those <25 years may improve retention. Establishment of a national online registration database for all patients can reduce multiple registrations at health facilities.
Karsor Kollie, Ministry of Health Liberia
Abstract Id: 3874

Integrating vertical disease programmes to sustain gains and ensure no one is left behind: A case study of the Liberian NTD integrated case management plan

Co-authors: Karsor K Kollie - Ministry of Health Liberia

Purpose: The purpose of this abstract is to share learnings from the complex task of shifting a vertical disease control programme to one that takes an integrated approach within health system structures. Through the case study of Liberia’s Neglected Tropical Disease (NTD) programme, I will share my experiences as a key advocate of this approach to ensure a sustainable and pragmatic response to resource and finance constraints and changing disease burdens.

Focus/content: I will begin by presenting the rationale for a new integrated approach to NTD programme delivery: in the case of the Liberian NTD programme, this aims to ensure that people living with lifelong morbidity and disability are not left behind as vertical programme priorities shift. Many national health programs have used vertical approaches in their efforts to prevent, control and eliminate diseases, including; polio, TB, Malaria, etc. Vertical programmes require huge technical and financial input and have been criticised for not being sustainable and not supporting broader health system strengthening. Additionally, vertical approaches are likely to limit broader case detection and reporting and the provision of holistic primary health care. Moving toward integration in these instances should promote equitable and effective programme delivery to ensure that people living with NTDs are not left behind. Since 2016, Liberia has been planning and implementing an integrated approach to the management of several NTDs, including Buruli ulcer, lymphoedema leprosy etc. As the current programme manager for this programme in Liberia, I will share my experiences of the pathway of the integrated approach, from inception to implementation. It is anticipated that through such sharing actors from other contexts and disease programmes may be able to apply such integrated approaches in their own settings as well as share their own learning.

Significance for sub theme: In a resource poor country, innovative integrated approaches could be a better alternative to vertical approaches and present an opportunity for health systems to become more efficient and equitable in the services they deliver. Sharing new learnings from Liberia gives the opportunity for discussion in international settings about new models for disease control that can be mobilised to ensure primary health care systems that deliver for all.

Target audience: Policy makers, NGOs, UN Agencies, researchers, managers, MoH staff etc.
International Health Regulations Compliance in India: The Politics of Global Health Security

Co-authors: Srikanth Kondreddy-McGill University; Raphael Lencucha-McGill University; Nicholas King-McGill University; Seema Sahay-National AIDS Research Institute; Adam Kamradt-Scott-University of Sydney; Ruediger Krech-World Health Organisation; KS Nagesh-Rajiv Gandhi University of Health Sciences

Today’s deeply interconnected world greatly heightens the trans-border risk of infectious disease. The spread of Ebola in 2015 illustrates this vulnerability while revealing that many countries are ill-prepared to prevent, detect, assess, notify and respond to infectious disease outbreaks. Although national governments are charged with the responsibility of safeguarding the health of their citizens, these responsibilities are embedded in a web of international standards, norms, and commitments. Recently, there has been a push for the World Health Organization (WHO) to facilitate the development and implementation of international legal frameworks to address trans-border health concerns. The International Health Regulations (IHR), which came into force in 2007, is one such legally binding agreement that aims to standardize disease surveillance, reporting, and response among the 196 national governments who are members. Despite enthusiasm surrounding the potential for IHR to strengthen the global response to infectious disease outbreaks, as of 2016, only 33% State Parties have fully implemented the IHR core obligations. The low levels of implementation point to the need to better understand the relationship between governments and these international institutions. In exploring this relationship, we argue that geopolitical, cultural and economic factors are of paramount importance.

Our study engages with international relations theory to understand the factors that shape IHR implementation in India. We have used a combination of qualitative interviewing and ethnographic methods to examine how decision-makers engage with IHR commitments. Our approach seeks to gain a local understanding of the relationship between India and the global political economy, meaning India assigns to IHR commitments, and the notion of global health security more broadly. The Institutional Review Board at the McGill University and National AIDS Research Institute approved the study. The potential impact includes, any discussion of the governance of global health security must be grounded in an understanding of the societal context in which such governance occurs. This research will provide infectious disease governance context in India, thereby a national perspective on global health security.
The same size of cake for more kids: Voice of Indonesian Nurses on the National Health Insurance

Background: Three years since the Indonesia’s National Health Insurance (NHI) introduced in 2014, about 66 percent of the country population has registered in the NHI scheme. As part of the universal health coverage policy, fairness and equity in accessing health care is a central issue in this resource constrained country, especially in the secondary and tertiary health care facilities. Depending on the premium paid, hospitalized patients receive care in three different classes. As the direct care provider, nurses are the largest workforce impacted by this policy. The purpose of this study is to describe narrative views and experiences of hospital nurses about fairness and equity in the NHI implementation.

Methods: This study employed a qualitative content analysis approach. Individual semi-structured interviews were conducted with a convenience sample of hospital nurses. A total of 16 nurses from three different levels of public hospitals in East Java province, Indonesia, were recruited and interviewed in a place and time determined by the nurses. This study received an ethical clearance from the Health Research Ethics Committee, Faculty of Nursing, Airlangga University, Indonesia.

Results: The analyzed data from the participants’ interviews yielded four themes and categories as follow: 1) helping the neediest people: i) access to care for everyone, ii) sharing for solidarity, iii) adequate standardized treatment; 2) the discriminatory service system: i) the dilemma of paying for priority, ii) different professional and resource allocations; 3) enduring the impact of the policy: i) a higher workload, ii) different attitudes for different social classes, iii) unimproved financial incentives; and 4) managing new changes: i) nurses as the center of communication, ii) addressing complaints, iii) strengthening the team work.

Discussion/Conclusion: The findings highlight justice issues in implementing the NHI system at hospitals as voiced by nurses. Hospital nurses acknowledged that the NHI is beneficial for people. However, the Indonesia hospital service system has allowed a discriminatory approach in caring for patients while nurses are required to bear the impact and make adjustments. Understanding and addressing those issues will improve fairness and equity in providing quality health care.

Keywords: equity, fairness, hospital, Indonesia, National Health Insurance, nurse.
Exploring the use of routine data for risk-based verification in performance based financing in low middle income countries: The case of Burkina Faso

Co-authors: Naasegnibe Kuunibe-Heidelberg University Hospital; Julia Lohman-Heidelberg University Hospital; Michael Schleicher-Heidelberg University Hospital; Jean-Louis Kouidiati -Heidelberg University Hospital; Manuela De Allegri-Heidelberg University Hospital

Performance based financing (PBF) has been piloted in over 32 low-middle income countries (LMCs) to improve access to quality health care. One key component of PBF is verification, which is described as the corner stone of the reform program. Verification involves ensuring the consistency of routinely collected data at the facility level, conducting patient surveys and directly observing the conditions of service delivery, with the overall aim of ensuring that actual performance is being paid for. It also aims to detect and prevent fraud, through rewards and punishment. Concerns about the cost of implementing verification have resulted in stronger calls for risk-based verification, where verification is applied only for a pre-selected subset of facilities. Pre-selection may be based on facility turnout/volume figures or the degree of complexity involved in day-to-day health service provision. Consequently, risk-based verification requires the collection and assessment of all facility characteristics, in a first step, and induces higher upfront costs. Using data from Burkina Faso to explore if routine data can form a basis for risk based verification, we employed administrative data from a recently launched large-scale pilot PBF program in Burkina Faso, which contains both initially declared health facility data and its PBF-verified counterpart. Declared data contain the volumes of services facilities reported and this is fed into the health information management system (HIMS) directly. A copy of this data is then submitted to PBF for payment, which is verified. We compared the two data sets to assess if outlier cases are consistent. We also examined the degree of misreporting by testing for significant differences between declared and verified quantities. An assessment of the former contributes to the current PBF verification discussion as it provides a first estimate about the overall potential of doing verification. Results show reporting outliers is associated with larger districts and facilities which initially declared outlier quantities also had outliers in the verified data. In addition, misreporting was found to be higher for high volume services compared to small volume services. There was also a mismatch between declared and verified quantities, however, the mean difference was generally less than 10 in absolute terms. Therefore, we conclude that routine data can be used to identify high risk facilities and services for risk based verification.
Barriers to Community-based Health Care Delivery: Community Healthcare Worker visits in Ghana

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Background

Ghana's Community-based Health Planning and Services (CHPS) aims to deliver essential health services directly to communities especially in deprived areas. The definition of a functional CHPS zone is one “where all the milestones have not been completed… but a community health officer has been assigned and provides a defined package of services to the catchment population, from house to house in the unit area”. By this definition, house to house visitation – to observe context and provide relevant health education, counsel women, treat minor ailments and make referrals – is an essential component of CHPS.

Strengthening CHPS in Ghana is key to achieving SDG 3.8 of universal health coverage. The home visitation component of CHPS is a pathway to SDG 3.2 reduction of neonatal mortality - home visitation by trained community health workers has been linked to reduced stillbirths and neonatal mortality. As such the challenges to delivering community-based care through home visits must be examined to find solutions.

Data and Methods

The study utilizes a concurrent triangulation mixed method design using data collected in 2017 by the CHPS+ project being implemented in rural districts of the Volta and Northern regions of Ghana. CHPS+ is a National Program for Strengthening the Implementation of the Community-based Health that collected baseline data using household surveys and qualitative systems appraisals in selected districts.

The household survey interviewed women of reproductive ages and collected information on maternal and child health, socio-demographic characteristics and healthcare access. The qualitative systems appraisal comprised focus group discussions with health workers and community members.

Spatial analysis studying the probability of receiving a home visit in the past three months was conducted using the quantitative data and a thematic analysis of qualitative data from frontline workers.

Discussion of Results

The data reveals substantial gaps in community healthcare delivery via home visits: less than a tenth of women interviewed reported receiving a home visit in the past three months. Further, less than one out of every three children born in the three years preceding the baseline survey received at least one postnatal homecare visit.

Geography is a strong predictor of women reporting a home visits as is the level CHPS functionality in the district. Lack of logistics, funding and staff in CHPS zones were additional explanations for community health workers not conducted the home visits as required.
Démarche réflexive en santé mondiale pour les chercheurs et les intervenants.

Contenu : La réflexion s’est déroulée en trois étapes. Premièrement, une session de brainstorming en groupe s’est tenue pour mieux comprendre en quoi consiste une démarche réflexive. Deuxièmement, un appel à communication (AAC) a été lancé pour développer une réflexion individuelle recueillant les expériences de chacun. Troisièmement, un atelier réflexif a été organisé en quatre stations thématiques : l’implication du chercheur en contexte de pauvreté, l’adaptation des attitudes et discours sur le terrain, la construction d’une relation de confiance avec les communautés locales et le positionnement dans l’entretien avec les élites. Cela permet de tirer des leçons des expériences partagées en groupe. Des captations vidéos et des croquis inspirés des discussions des stations ont permis de partager les principales leçons apprises.

Ces étapes ont abouti à un numéro spécial illustré des cahiers scientifiques de la chaire RÉALISME avec une vidéo synthèse de l’atelier, un éditorial dressant le bilan de l’ensemble des activités, et des articles réflexifs.

Importance pour la dimension traditionnelle constitutive : Ce programme de développement des capacités réflexives inclus des formes d’apprentissage à la fois au niveau individuel qu’au niveau collectif. Les participants et auteurs des textes ont pu développer une plus fine connaissance de ce qu’implique la démarche réflexive en santé mondiale pour le chercheur. Le partage des leçons apprises a permis d’amorcer une réflexion sur les implications de la pratique réflexive en santé mondiale.

Public cible : Au vu de l’évolution des pratiques et des contextes en santé mondiale, il semble primordial de sensibiliser les chercheurs et intervenants au développement d’une démarche réflexive pour garantir des interventions cohérentes, adaptées au contexte, et répondant aux objectifs communs de développement durable.
Sha Lai, School of Public Policy and Administration, Xi’an Jiaotong University
Abstract Id: 1654

The distribution of benefits under social health insurance: evidence from China’s new rural cooperative medical system

Co-authors: Sha Lai—School of Public Policy and Administration, Xi’an Jiaotong University; Jianmin Gao—School of Public Policy and Administration, Xi’an Jiaotong University; Zhongliang Zhou—School of Public Policy and Administration, Xi’an Jiaotong University

Background:

China has been making efforts to establish a new social health insurance system, which is financed by government subsidies and individual contribution. Since the 1990s, as one of three basic medical insurance schemes in China, covering more than 800 million Chinese rural population, the New Cooperative Medical Scheme (NCMS) is one of the most widely covered health insurance in the world. The scheme is characterized by that insured persons can enjoy an equitable benefit package by paying a flat-rate premium. However, the distribution of benefit between the rich and the poor is not necessarily equitable because of the differences in patterns of disease and health care utilization across income groups. This study, therefore, aimed to estimate the distribution of benefits under NCMS cross income groups and compares the level of income-related inequities in NCMS benefit from 2008 to 2013.

Methods:

Data were drawn from two representative and comparable cross-sectional household health surveys dataset conducted in 2008 and 2013—the fourth and fifth National Health Services Survey in Shaanxi Province. 9507 NCMS enrollees in 2008 and 38010 in 2013 were included in this analysis. Benefits from NCMS was measured in two ways: one by probability of receiving reimbursement and the other by absolute amount of reimbursement. Two-part models were used to estimate the benefit distribution and adjust benefits for health care needs. Using the concentration curve and concentration index (CI), we estimate the overall degree of economic-related inequality. The degree of horizontal inequity was further estimated by indirectly standardized measures in terms of the “equal treatment for equal needs” concept.

Results:

Our results show that higher income groups were associated with higher likelihood of receiving reimbursement, and also with higher amount of reimbursement under NCMS. The positive need-adjusted CIs in the probability and amount of receiving further suggest that there existed clear pro-rich inequality in benefits distribution in 2008 and 2013. Comparing the need-adjusted CIs between 2008 and 2013, a decreasing trend was observed, which suggest that the pro-rich inequality in NCMS benefits is reduced with the improving level of insurance package.

Conclusions:

Although the trade-off between policy feasibility and equity has become a policy challenge for developing countries in formulating social health insurance funding and benefit package, the inequality can be gradually reduced through some adjustment of the medical insurance scheme and with the help of other relevant policies.
THE IMPACT OF USER CHARGES ON HEALTH IN LOW- AND MIDDLE-INCOME COUNTRIES: A SYSTEMATIC REVIEW

Co-authors: John Tayu Lee - Nossal Institute for Global Health, University of Melbourne

Background

The objective of this study is to examine the association between changes in user charges and health outcomes in LMICs, with the additional objective to assess the association on specific population groups. We also sought to identify explanatory factors for any associations identified, such as increased healthcare utilization and reduced poverty through financial protection.

Methods and Findings

We conducted a systematic review and searched six medical, public health and economics databases: Medline, Econlit, Scopus, Jstor, WHO Library Database (WHOLIS) and World Bank e-Library. We included primary original articles in English published from January 1990 to September 2017, without any restriction on populations and settings. We included quasi-experimental (QE) studies and randomized control trials (RCT). We abstracted data using a standardised form, including study design, intervention, population, outcome measures, statistical approach, and highlighted literature gaps using evidence map. The review was registered with the PROSPERO (registration CRD 42017054737).

17 studies from 12 countries met our eligibility criteria. The overall study quality was moderate. 16 studies examined associations between reduction in user charges and health outcomes. Nine studies assessed general health outcomes, four on mortality, three on infectious disease-related outcomes, two on chronic disease-related outcomes and one on nutritional and anthropometric outcomes. Difference-in-differences (DID) analysis was the most frequently used study design. The findings suggest a modest relationship between removing user charges and improvements in health, but this is dependent on health outcomes measured, the populations studied, study quality and policy settings. Increased healthcare access and improved financial protection were possible explanatory factors identified the association. This relationship is more likely to be found in studies focusing on the impact of user charges on children and lower income populations. Studies examining infectious-disease related outcomes, chronic disease management, and nutritional outcomes were too few to make meaningful generalisations. Furthermore, there were insufficient studies examining the impact of increased user charges on health outcomes. Several studies indicated that increased healthcare utilization and improved financial protection can be explanatory factors which identified the association between reduced user charges and better health outcomes.

Conclusions

Removing user charges was associated with improved health outcomes, particularly for vulnerable groups such as children and low-income populations. Findings from this study further strengthen the case for accelerated progress toward universal health coverage.
System Barriers in Care Continuum for HIV-Positive Men Who Have Sex with Men in China

Co-authors: Chunyan Li-University of North Carolina at Chapel Hill; Kathryn Muessig-University of North Carolina at Chapel Hill

Background: Free HIV testing and antiretroviral treatment (ART) began in China in 2006. By 2014, 80% of all diagnosed HIV patients with CD4 counts under 500/mm³ were receiving ART. While HIV is stable or decreasing among most populations, the epidemic is still increasing among men who have sex with men (MSM). Improving MSM's engagement and continuity in HIV treatment is critical for individual patient outcomes and preventing secondary transmission. This research aimed to identify barriers in the Chinese health system that impede HIV-positive MSM accessing HIV care and treatment.

Methods: Qualitative data was collected through in-depth interviews with HIV-positive MSM (n=30) recruited through clinics and a community-based organization (CBO), and group interviews with HIV and non-HIV care providers (n=2) in Chengdu, China. For HIV patients, questions related to HIV diagnosis, ART initiation, HIV care, and experiences with healthcare providers. For providers, questions covered experiences and perceptions about treating HIV patients. Thematic analysis was conducted by two coders using Dedoose online qualitative software.

Results: Average age of MSM participants was 31.5 years old. Length of time on ART was between 1 and 7 years (mean, 3.3 years). Patients identified a range of health systems-level barriers to HIV care initiation and continuity including: ID and contact information requirements to access HIV testing results at hospital/CDC; residential ID requested for migrant patients to receive ART from local providers (which delayed ART initiation); limited number of CDCs and hospitals in major cities certified to provide CD4 and viral load testing (requiring significant patient travel and wait times); limit to 3-months doses of ART dispensed regardless of patient's HIV health stability; and frequent discrimination in non-HIV healthcare settings. From the provider side, reported lack of training in HIV occupational exposure protection and limited access to post exposure prophylaxis (PEP) were identified as barriers in treating HIV patients.

Conclusions: In China, health systems-level barriers are impeding optimal treatment initiation and continuity of care for HIV-positive MSM. While longer-term efforts can improve decentralization of HIV care resources, care navigation and/or a simplified application process could also help patients initiate ART sooner. Trainings and medical resources for protecting providers against occupational exposure to HIV are of the urgent need to reduce discrimination and keep HIV patients in the system.
Poster Abstracts

Millicent Liani, Liverpool School of Tropical Medicine
Abstract Id: 2368

Towards an integrated conceptual framework for understanding intersecting gender inequities in scientific career progression in higher education institutions in sub-Saharan Africa

Co-authors: Millicent L. Liani-Liverpool School of Tropical Medicine; Isaac K. Nyamongo-University of Nairobi & Co-operative University of Kenya, Nairobi, Kenya; Rachel Tolhurst-Liverpool School of Tropical Medicine

Purpose: The slow progression and under-representation of women in senior positions in scientific careers is a well-known and persistent global problem, especially among academics based at universities. The ‘leaky pipeline’ metaphor has commonly been used to describe this. Current statistics indicate that women account for only 28 percent of all researchers worldwide. Sub-Saharan Africa (SSA) has been identified as the region with the lowest numbers of women in science careers. However, to inform action for change, there is a need to go beyond numbers to understand and document the underlying social, cultural and institutional drivers and processes that produce gender inequities in science careers. This requires a theoretically rigorous gender analysis framework/theory that is relevant to SSA contexts and sufficiently accounts for variations among both women and men. No such framework is currently available. This paper aims to provide an integrated conceptual framework for explaining gender inequities in scientific career progression in SSA.

Focus/content: This paper draws on a literature review of emerging theories and empirical evidence on the dimensions of and reasons for the prevailing gender inequities in higher education institutions in SSA. Based on the review, we developed an integrated conceptual framework combining the ‘systems of career influences’ model of the interplay between individual and organizational factors influencing career progression, with a social relations approach as an institutional gender analysis framework, and an intersectional perspective. We applied this framework to the available empirical findings from SSA to test it for ‘fit’ and to develop a preliminary explanation of observed inequities. Our findings demonstrate that women and men’s (lack of) progression in academic/scientific careers is shaped by intersections between gender roles and social power relations of gender within the family, wider society and academic institutions themselves.

Significance: We argue that this integrated model provides a scientific foundation upon which critical thinking and analysis of the problem of inequitable career progression with a gender and social inclusion lens can be founded. From such an analysis, a theory of change for gender transformation can be developed, with specific strategies based on a thorough and respectful understanding of SSA realities. This framework could be used by institutional research leaders and policy makers in considering how to drive change towards enhancing equity in career progression of its researchers and promoting diversity. We present it to encourage other researchers to test it for ‘fit’ against empirical evidence and to inform action for change.
Poster Abstracts

Lars Lindholm, Umeå University
Abstract Id: 2542

We propose a novel measure for multi-sectoral public health interventions: Capability-adjusted life-years, CALYs

Co-authors: Lars Lindholm-Umeå University; Björn Ekman-Lunds University; Inna Feldman-Uppsala University; Lars Hagberg-Örebro University; Anna-Karin Hurtig-Umeå University

Background: Population health is largely determined by living conditions. As a consequence, the Swedish public health policy has 11 targets, out of which only two belong to health care. Responsible for the other nine are mainly governmental organizations and local authorities. The most sophisticated evaluations in public health use composite measures such as cost per QALY gained (Quality Adjusted Life Years). QALY is a measure of health related quality of life and public health actors are satisfied with QALYs. However, cost per QALY is not meaningful for other actors because they have not any particular responsibility for population health.

Purpose: The purpose is to develop and test a new measure—’capability-adjusted life years’ (CALY)—that can be used both to evaluate the effects of policies on quality of life and to monitor living conditions. In order to develop CALYs, two research questions will be considered: What capabilities are the most vital for individuals in Sweden? What are the relative weights of selected capabilities according to the views of Swedish people in general?

Amartya Sen proposed that the most important information to consider is capabilities, i.e. whether an intervention increases individuals’ opportunities to live a flourishing life according to their wishes. Methods for the identification and selection of most important capabilities have varied. Both expert-led and participatory approaches have been suggested. We suggest a further variant, and intend to use “wise laymen” and a Delphi-process giving opportunities for reflection and dialogue.

To be able to create a one-dimensional scale, the relative value of different sets of capabilities has to be investigated. Health economics research on QALY- and DALY- weights has provided rich and relevant experiences. Possible methods for establishing the relative values of capabilities include ‘pairwise comparison’ in connection with ‘trade-off’ questions and ‘experience weights’.

Significance. The cost per CALY has a parallel potential to cost per QALY for economic evaluations of multi-sectoral interventions. Since CALY measures quality of life (instead of health related quality of life) it has an intrinsic value for all public actors, and creates thus incentives for collaboration. There are a number of multisector interventions that certainly improve population health, and are suitable for the CALY measure such as strategies to eliminate child poverty, hinder school drop-outs, and expand paternity leave.

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Background: Performance-based Financing (PBF) is among the currently most popular and widely introduced approaches for strengthening health systems to deliver high quality services to all in need. A frequently discussed but yet little researched potential unfavorable and unintended consequence of PBF is “intrinsic motivation crowding out”, the erosion of high-quality sustainable motivation through the introduction of PBF, particularly the individual financial reward component included in most PBF interventions. We used the opportunity of the introduction of PBF in Malawi to investigate whether and how PBF affects intrinsic motivation.

Methods: The study employed a mixed-methods research design theoretically grounded in Self-Determination Theory (SDT). The quantitative component served to estimate the impact of PBF on intrinsic motivation, relying on a controlled pre- and post-test design, with data collected from health workers in 23 intervention and 10 comparison facilities before (n=74) and approximately two years after (n=100) the implementation of PBF. The qualitative component, relying on in-depth interviews with health workers in selected intervention facilities one (n=21) and two (n=20) years after the start of PBF, served to explain how PBF did or did not bring about change in intrinsic motivation. Specifically, it allowed us to examine how the various motivation-relevant elements and consequences of PBF impacted health workers’ basic psychological needs for autonomy, competence, and relatedness, which SDT postulates as central to intrinsic motivation.

Results: Our results indicate that PBF did not affect health workers’ overall intrinsic motivation levels, as positive and negative intervention effects on psychological needs satisfaction counteracted each other. On the positive side, most importantly, PBF enhanced health workers’ feelings of competence and perceived ability to do their job well. Among the various design, implementation, and contextual challenges negatively affecting intrinsic motivation, some seemed potentially avoidable or directly addressable (e.g. ensuring transparency in verification and reward allocation to avoid creating feelings of disrespect), whereas others rather appeared inherent to the PBF concept (e.g. feelings of unfairness and dissatisfaction among part of the workforce particularly in regards to individual rewards).

Conclusion: PBF has the potential to both positively and negatively affect health workers’ intrinsic motivation. Our results underline the potential value of explicit strategies to mitigate unintended negative impact of unavoidable challenges on intrinsic motivation, for instance by building autonomy support activities into PBF designs.
Liyong Lu, Sichuan University
Abstract Id: 611

The Relationship between Market Competition and Hospitalization Costs of Stroke Patient

Co-authors: Liyong Lu-Sichuan University; Jay Pan-Sichuan University

Importance: The impact of competition on hospitalization costs for stroke patient was explored by this research. Firstly, in this research, the impact of competition on hospitalization costs for a kind of diseases with a serious condition, information asymmetry and lack of selectivity was found. Secondly, the suggestions for the health policy about controlling hospitalization costs were provided, which can help to reduce the burden of patients.

Contribution: There are no studies about the relationship between competition and the costs of single disease in China. This study is not only the first one to study the relationship between the hospital competition and the single disease costs in China, but also the first one to explore the relationship between competition and costs of stroke no matter in the China or abroad.

Objective: To study the relationship between hospital competition and hospitalization costs of stroke patient.

Methods: Herfindahl-Hirschman Index (HHI) was calculated by the fixed radius method to measure the competition degree of hospital. Through chi-square test, nonparametric test, t-test, and multiple mixed effects log-linear regression model to explore the relationship between hospitalization costs of stroke patient and hospital competition.

Results: A total of 94,475 patients were included in the final analysis, of whom 52.50% were men and 47.50% were women. When adjusted by the HHI, the median hospitalization costs in the area with low, medium and high concentration were 6854.21 ¥ (IQR, 3998.03-12378.65), 6093.11 ¥ (IQR, 3594.14-11087.51), and 5282.62 ¥ (IQR, 3171.76-9411.57) respectively. The positive correlation between HHI and hospitalization costs of stroke patient was found under the condition of controlling other influence factors, that is, the hospitalization costs increased with the increase of HHI. In other words, the smaller competition degree, the higher hospitalization costs of stroke patient. We also found that the impact degree that the competition for the for-profit hospitals and low-level hospitals are bigger than the non-profit hospitals and high-level hospitals. And competition can help reduce the different kind category costs except for the diagnose costs.
Is the urban child health advantage declining in Malawi?: Evidence from Demographic and Health Surveys and Multiple Indicator Cluster Surveys

Co-authors: EDGAR ARNOLD LUNGU-UNICEF Malawi; Regien Biesma-Royal College of Surgeons in Ireland; Catherine Darker-Trinity College Dublin, Ireland

Background: In many developing countries including Malawi, health indicators are on average better in urban than rural areas. This phenomenon has largely prompted Governments to prioritise rural areas in programmes to improve access to health services. However, considerable evidence has emerged that some population groups in urban areas may be facing worse health than rural areas and that the urban advantage may be waning in some contexts.

Methodology: We used a descriptive study undertaking a comparative analysis of thirteen (13) child health indicators between urban and rural areas using seven data points provided by nationally representative population based surveys – the Malawi Demographic and Health Surveys and Multiple Indicator Cluster Surveys. Rate differences between urban and rural values for selected child health indicators were calculated to denote whether urban-rural differentials showed a trend of declining urban advantage in Malawi.

Results: The results show that all forms of child mortality have significantly declined between 1992 and 2015/16 reflecting successes in child health interventions. Rural-urban comparisons, using rate differences largely indicate a picture of the narrowing gap between urban and rural areas albeit the extent and pattern vary among child health indicators. Of the thirteen child health indicators, eight (Neonatal Mortality, Infant Mortality, Under five Mortality Rates, stunting rate, proportion of children treated for: diarrhoea, and fever, proportion of children sleeping under Insecticide Treated Nets, and children fully immunised at 12 months) show clear patterns of a declining urban advantage particularly up to 2014. However, U-5MR shows reversal to a significant urban advantage in 2015/16, and slight increases in urban advantage are noted for IMR, underweight, full childhood immunisation and stunting rate in 2015/16.

Conclusions: Our findings suggest the need to rethink the policy viewpoint of a disadvantaged rural and much better-off urban in child health programming. Efforts should be dedicated towards addressing determinants of child health in both urban and rural areas.

Key words: child health; urban; urban slum; Malawi; urban advantage
Xiaochen Ma, Peking University
Abstract Id: 1450

**Barriers to Uptake of Cataract Surgery Among Elderly Patients in Rural China**

Co-authors: Xiaochen Ma - Peking University

**Background:** Age-related cataract is the leading cause of blindness in China and around the world. Cataract surgery is among the most cost-effective procedures in medicine. However, China's rate of cataract surgery far behind its poorer neighbors, especially in rural areas, leading to a substantial burden of preventable poverty. Government cataract surgical programs exist, but surgical uptake rates are as low as 20-30% among affected patients in rural areas.

**Methods:** A population-based household survey in rural China in 2016 in 79 village-groups in central China. Inclusion criteria was defined as aged 50 years or older; presenting visual acuity (PVA) \(\leq 6/18\) in the better seeing eye examined in a prior-study visual acuity screening. A full ocular examination with dilation of the pupil was to determine eligibility for cataract surgery as PVA \(\leq 6/18\) in the better-seeing eye due to cataract. Multivariate logistic regressions were estimated to examine the determinants of the two outcome variables: acceptance of free vision screening among elderly rural dwellers and acceptance of free surgery among eligible cataract patients.

**Results:** Among 613 elderly rural dwellers, 596 (97.2%) completed household survey (mean [SD] age, 71.5 [10.0]) years; 79.8% female. 382 (64.1%) accepted free vision screening. Acceptance of vision screening was positively associated with ability to perform physical activities (odds ratio = 3.66; 95% CI, 1.96-4.80; \(P < 0.001\)), economic productivities of household members (odds ratio = 3.75; 95% CI, 1.51-9.31, \(P = 0.01\)), and having physical examination over the past 12 months (odds ratio = 1.64; 95% CI, 1.14-2.35, \(P = 0.01\)). Awareness, knowledge and attitudes were not associated with the acceptance of vision screening. Among them, 193 (50.5%) were eligible for cataract surgery. Only 23 (11.9%) conducted cataract surgery prior to the study. 140 (72.5%) accepted free surgery. The factors to the acceptance of free cataract surgery were similar to that of free vision screening, ability to perform physical activities (odds ratio = 2.99; 95% CI, 1.94-4.61; \(P < 0.001\)), economic productivities of household members (odds ratio = 3.02; 95% CI, 1.57-7.92, \(P = 0.02\)), and having physical examination over the past 12 months (odds ratio = 1.60; 95% CI, 1.08-2.36, \(P = 0.02\)).

**Conclusions:** Among elderly rural dwellers in China, there was a high prevalence of cataract and a very low rate of cataract surgery. Community-based screening programs as well as free surgery programs are needed specifically targeting rural patients.
Sustaining benefits of health innovations through transitioning ownership to government: A conceptual model for low-resource settings

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Background
Sustaining the benefits of health innovations beyond funding cycles or the physical presence of an individual organization is the aspiration of many global health stakeholders. In low resource settings, programs funded by international donors often transition to local financing and management as a means to achieve long-term sustainability. The issue of sustainability determines whether governments allow for piloting of new interventions or whether donors fund specific proposals. Although it is common for some programs to transition to local financing and management, there is limited evidence to inform such processes and there are questions about local capacity to maintain services at a level that will provide on-going benefits after the termination of major support from an external donor. We reflect upon experiences of a previously NGO-run, immunization supply chain strengthening intervention, the District Logistics System (DLS) in Mozambique, in order to draw lessons from our transition approach. Also, we identify key elements necessary for transitioning donor-funded operations to government and the contextual factors which influence success in diverse contexts. Finally, we seek to contribute to global learning through the development of a conceptual framework to inform transition approaches for donor-funded programs in low-resource settings.

The conceptual framework
We reviewed implementation of the DLS just over a year after fully transitioning operations to government. The research involved consultation with Ministry of Health staff at multiple levels, NGO staff, donors and partners. In addition, we reviewed the routine performance data. During analysis, we sought to understand the findings within the lens of existing literature on transition and sustainability and drew upon the work of Rasschaert et.al (2014) and Bennett et al. (2015) from which we developed an initial conceptual framework with the following pillars: 1) design and implementation processes; 2) organizational capacity; 3) transition readiness; 4) routine data and 5) local context. In this presentation, we will show how each of these pillars contributed to the transition process. In addition, we will show from our empirical findings how lack of staff motivation and effective accountability mechanisms challenged the transition and make a case for their inclusion in the conceptual framework.

Conclusion
Given the growing interest in transition approaches and the need to maintain benefits post transition, this framework may be applied in other settings.
CONTEXUAL FACTORS THAT INFLUENCE UPTAKE OF PMTCT AMONG SEMI-NOMADIC WOMEN IN KENYA: A QUALITATIVE STUDY

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BACKGROUND

Use of anti-retroviral therapy by pregnant women has been shown to be effective in reducing transmission of HIV to their babies by up to 2%. Kenya has scaled up PMTCT countrywide with the aim of reaching all HIV positive pregnant women and their HIV exposed infants up to 24 months after birth to prevent the transmission. Although there was a significant increase in ART coverage in Laikipia County from 48% in 2013 to 92% of the annual target in 2015, the women from pastoral communities representing 41% of the population were not effectively reached. This study sought to understand the factors that affected their access and utilization of these services.

METHODOLOGY

Community based cross sectional qualitative study was conducted among the pastoralist community of 7 wards in Laikipia county in December 2016. Five focus group discussions were held with different groups in each ward representing men, women, youth, community leaders and mothers. A total of 35 FGDs were carried out by the research team. Semi structured interview guides on barriers to accessing PMTCT services were used. Responses were recorded on paper and analysis done by thematic framework.

RESULTS

Among the men were health system barriers; distance from facilities with dangerous terrain with wildlife, poor road networks, harassment by health workers, and lack of laboratory services whereas cultural barriers were predominant among the women; failure of men to give permission for women to attend ANC, coercion by partner and extended family to visit TBAs., women domestic violence upon HIV positive diagnosis, preference for older female midwives and squatting birthing position and not lithotomy. Economic barriers among the women; women lack autonomy to earn an income and health facilities are more expensive than the Traditional Birth Attendants. The youth cited social barriers; stigma and discrimination by the peers and low societal statue given to HIV positive people. Overarching responses included lack of information on PMTCT and shame in conceiving a child as a HIV positive woman

CONCLUSION Despite successes of PMTCT programs, there are significant gaps in marginalized areas; their effectiveness rests on a resilient and robust health system that recognizes the unique contexts that HIV positive pregnant women live in and implements broader strategies that increase equitable access to care. This includes advocacy on sexual and reproductive rights of HIV positive women, culturally responsive health systems, task shifting HIV testing services to community health volunteers and implementation of community based ART services.
ANINDO MAJUMDAR, All India Institute of Medical Sciences (AIIMS), Bhopal, India

Abstract Id: 769

Bidirectional Screening for Tuberculosis and Diabetes: How well are we doing? A Mixed-Methods Study from a district in North India

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Background: Government of India recommends bidirectional screening for Tuberculosis (TB) and Diabetes Mellitus (DM) for early diagnosis and management of TB-DM patients. We aimed to assess i) proportion of TB patients screened for DM and vice-versa ii) factors associated with screening, and iii) explore the enablers, barriers and solutions related to bidirectional screening.

Methods: We conducted a mixed-methods study with quantitative (retrospective cohort study of patient records) and qualitative (interviews of patients, healthcare providers (HCPs), and key district level staff) components. We planned to review the treatment cards of all TB patients registered with the national TB programme, and the records of all DM patients registered in designated Non-communicable disease (NCD) clinics, in Sonipat district (North India) between November 2016 and April 2017. We performed log-binomial regression to determine factors associated with screening. Content analysis of interview transcripts was done to generate themes and sub-themes.

Results: There were no NCD clinics functioning in the district and screening for TB among DM patients was not implemented. Of 562 TB patients, only 137 (24%) were screened for DM. Among them, 17 (12%) patients had pre-existing diabetes, 102 (75%) patients had random blood sugar (RBS) value of &lt;140 mg/dl and 18 (13%) patients had a RBS value ≥140. There was no documentation of fasting blood sugar. Only two DM patients were documented to have received anti-diabetes treatment. TB Patients registered at community health centres and the district hospital were four and eight times more likely to have been screened, compared to those at primary health centres. Low levels of awareness among patients, poor knowledge of guidelines among the front-line HCPs, lack of manpower, and inadequate training were found to be the barriers to screening. Enablers were mainly the positive attitude of HCPs and programme staff towards advantages of screening. The key solutions suggested were to improve awareness of HCP and patients regarding the need for screening, training of HCP and ensure the availability of DM testing facilities at the primary health centre.

Conclusions: The implementation of bidirectional screening was poor. Several implementation challenges were identified. These need urgent attention.
An evaluation of Renal dialysis provided through a public private partnership at a tertiary hospital in Limpopo, South Africa

Co-authors: Tumiso Amanda Malatji-Limpopo Department of health; Joseph Wamukuo-Limpopo Department of health; Khanyisa Sono-Limpopo Department of health

Introduction

Chronic kidney disease is increasingly recognised as an important cause of morbidity and mortality in globally and in South Africa. The cost renal dialysis limits access to dialysis treatment in developing countries. Public Private Partnership (PPP) has been proposed as an innovative strategies to strengthen the provision of renal dialysis by leveraging on the skills of the private sector. The aim of the research was to evaluate PPP model for the provision of renal dialysis services at a tertiary hospital in Limpopo South Africa.

Methods

A mixed method study was conducted to evaluate the costs and outcomes of the public private partnership renal dialysis unit. A heath provider's perspective was used to estimate the cost of providing dialysis through public private partnership. A top down approach was used to estimate the average annual cost per patient on Haemodialysis and Peritoneal Dialysis. Trained researcher interviewed patients to determine the patient satisfaction and health related quality of life as measures of outcome.

Results

During the six year period, the total cost of the renal dialysis PPP project increased from R16 072 152 for 77 dialysis patients to R41 005 931 for 182 dialysis patients. The average annual cost per patient was estimated to be R220 777 and R265 297 for HD and PD respectively in 2012. The PPP approach cost an additional 25% more than the cost of the actual inputs required for dialysis. Patient's satisfaction and health related quality of life was reported to be high among the dialysis patients.

Conclusion

Although the cost of dialysis is exceptionally high, the relatively high scores for health related quality of life among patients on dialysis suggests that public private partnerships impact positively patient outcomes. Furthermore, the high cost of renal dialysis highlight the importance of the prevention of chronic kidney disease at a primary healthcare level.
Formalising government and faith-based agreements enables Malawi to implement UHC objectives

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Background:

Health care is provided free by Government health facilities in Malawi. However, many Malawians are only able to access Christian Health Association of Malawi (CHAM) facilities. CHAM covers approximately 35% of health services in Malawi and charges fees, which poor Malawians cannot afford to pay. Because of CHAM’s significance as a private service provider, it potentially has a key contribution to make to UHC. Government and CHAM have worked together to increase access to basic health care since 2005, through service level agreements (SLAs). The se expand access to a set of free health services through CHAM facilities, funded by the Government. A number of challenges meant that some SLAs were abandoned between 2006 and 2013. Reviving and improving SLA management became a high Ministerial priority in 2014.

Methodology:

The Malawi Health Sector Programme – Technical Assistance Component (MHSP-TA) provided TA to both CHAM and the Ministry of Health to support implementation, optimize results and build capacity to support sustainability of SLAs. The initial overarching focus of support was to operationalise these SLAs. This involved supporting development of a new MOU and implementation plan, which included new SLA guidelines, price list, resource allocation framework and budget. With sustainability in mind, additional TA also supported establishment of a functional SLA Management Unit to manage SLA operations and resources.

For routine monitoring of outcomes of SLAs, a cross-sectional comparative analysis of DHIS2 data taken from January 2015 to December 2016 for 149 facilities examined the number of patients seen before and after an SLA had been signed. The key services examined were antenatal care, post-natal care and delivery by skilled birth attendants – important for improving maternal and neonatal health outcomes.

Results:

Very significantly increased client volumes were seen in MNCH, infectious disease control, mental health services and some NCD services. For example, in one, representative health centre normal deliveries increased by approximately 300%. This increase was not matched in comparison sites. With improved management, the number of SLAs expanded from 43 (2015) to 120 (2017) and a reduction in outstanding SLA debts from MK 792m (2015) to MK298m (2016).

Conclusion:

In close partnership with Government, faith-based providers can make significant contribution to countries’ efforts to achieve UHC. In Malawi technical efforts are now focusing on assisting the Ministry of Health to establish an effective Public-Private-Partnership Unit to further enhance the role of the private sector in the health sector.
Stephen Maluka, University of Dar es Salaam  
Abstract Id: 1968  

“Unless you come with your partner you will be sent back home”: Strategies used to Promote Male Involvement in Antenatal Care in Southern Tanzania  

Co-authors: Stephen Oswald Maluka-University of Dar es Salaam; Apollonia Kasege Peneza-Masasi District Council, Tanzania  

Background  
Male involvement in pregnancy and child birth has been shown to improve maternal and child health. Many countries have used different strategies to promote participation of men in antenatal care services. While many strategies have been employed to promote male participation in antenatal care, a few of them have been evaluated to provide much-needed lessons to support wider adoption. This study aimed at describing strategies that were used by health providers and the community to promote male participation in antenatal care services and challenges associated with the implementation of these interventions in Southern Tanzania.  

Methods  
We used qualitative data and analytical methods to answer the research questions. The study relied on semi-structured interviews with health providers, men and women, village and community leaders and traditional birth attendants. Data were analysed using thematic approach.  

Results  
The findings of this study revealed that different strategies were employed by health providers and the community in promoting participation of men in antenatal care services. These strategies included: health providers denying to give services to women attending antenatal care without their partners, fast-tracking service to men attending antenatal care with their partners, and providing education and community sensitisation. The implementation of these strategies were reported to have both positive and unintended consequences.  

Conclusions  
This study concludes that despite the importance of male involvement in pregnancy and childbirth related services, the use and promotion of the male escort’s policy should not inadvertently affect access to antenatal care services by pregnant women. In addition, programmes aiming for men’s involvement should be implemented in the way that respect, promote and facilitate women’s choices and autonomy and ensure their safety. Furthermore, there is a need for sensitisation of health providers and policy makers on what works best for involving men in pregnancy and childbirth.
A new approach to strengthening accountability for better health outcomes for all: Insights from Tanzania

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The Primary Health Care principles are based on community participation and equity, which are supported by health promotion, intersectoral collaboration, and proper use of scarce resources for a universal health coverage. This presentation challenges current thinking around addressing corrupt practices within health systems which to date have been largely unsuccessful. Drawing on preliminary findings from research carried out in Tanzania under the Anti-Corruption Evidence (ACE) consortium, we consider new approaches to addressing corrupt practices within health systems, with a focus on uncovering the informal systems and relationships between the formal and the informal institutions that can make the system work.

Tanzania’s large and dispersed health system is complex, dynamic and ever changing, struggling to meet the needs of a large and diverse population amidst a double burden of continuing infectious disease epidemics and increasing burden of Non Communicable Diseases. Patients and health providers in Tanzania face many challenges not just related to resource constraints but including de-motivated health workers, high absenteeism rates and low productivity; medicine stock-outs and leakages; ill-informed consumers and providers; failure to grant exemptions and waivers to the most vulnerable; and weak accountability, management and planning systems. Such systemic challenges and accountability constraints can often result in substandard care, and in extreme cases, no health care for the most marginalized. Attention is focused on strengthening delivery of quality primary health services to optimize use of available scarce resources as well as to ensure equitable and essential care.

Based on a systematic documentary review of available information, complemented by key informant evidence from public and private health providers and other health system stakeholders in Tanzania, and drawing on a political economy analysis, this presentation identifies the system bottlenecks as well as catalysts; and explores the potential of reforms, strategies and interventions (for example, evidence informed planning for results based delivery, direct facility financing, Health Facility Governing Committees, community monitoring systems and other citizen engagement initiatives, etc.) to address accountability constraints and corrupt practices towards a more resilient, efficient and accountable health system.

Given the paucity of evidence on successful interventions in this area, our research evidence will be of significant interest to the target audience which includes practitioners, academics, NGOs, think tanks, activists and policy makers at national, regional and global level.

Collaborators and Funding: Research undertaken under the ACE consortium with technical support from LSHTM and SOAS, University of London. Funded by DFID, UK.
Cost effectiveness analysis of nationally scaled point-of-care diagnostic platforms compared to central laboratory models for routine viral load monitoring of HIV-positive Kenyans on antiretroviral therapy

Co-authors: Emily R Mangone-Abt Associates; Christopher Cintron-Abt Associates; Romana Haider-Abt Associates; Ben Johns-Abt Associates; Carlos Avila-Abt Associates

Background: The National AIDS and STI Control Programme (NASCOP) in Kenya has scaled up its program for routine viral load (VL) monitoring to serve one million HIV-positive Kenyans receiving antiretroviral therapy (ART). Yet the traditional model of batching blood samples to national laboratories is expensive and presents logistical challenges including delays and loss of test results. Point-of-care (POC) technology presents an alternative to laboratory monitoring that may improve timeliness of test results, retention in care, and health outcomes. Identifying cost-effective VL monitoring technologies is critical to ensuring the provision of health services at national scale.

Methods: A Markov model was developed from a health system perspective to compare routine POC to laboratory VL testing among a hypothetical cohort of 100,000 adult HIV-positive Kenyans initiating ART. The model follows the cohort over a ten-year time horizon through first and second-line treatments using a six-month cycle length to accommodate NASCOP/WHO testing guidelines. Patients were modeled to be at risk of death, loss to follow up, and increased probability of transmission due to uncontrolled VL. Costs in 2017 USD were pulled from a parallel costing study which considered Cepheid GeneXpert-IV and Alere POC diagnostic platforms and Abbott and Roche laboratory technology. Clinical input parameters were derived from primary data collection on turnaround times and published literature. Parameters uncertainty was assessed through probabilistic and univariate sensitivity analyses. Costs and effects were discounted by 3% annually.

Results: Over the ten-year time horizon, POC implementation cost $4.48 million more than laboratory monitoring. POC implementation resulted in 852 quality-adjusted life years (QALYs) gained, 297 HIV transmissions averted, and 89 deaths averted. The incremental cost effectiveness ratios (ICERS) per QALY gained, transmission averted, and death averted over ten years were $5,259, $15,094, and $50,392, respectively. Using the 2016 Kenyan PPP adjusted, per capita GDP of $3,161 as a threshold and considering income elasticities from 1 to 2.5, POC implementation was not cost-effective. Model outcomes were most sensitive to probabilities of delay in test results.

Conclusions: POC implementation at national scale in Kenya is not cost-effective, possibly due to strong NASCOP investment in laboratory infrastructure over the past decade. However, POC platforms may be cost-effective in remote areas of Kenya and in countries with weaker infrastructure and HIV monitoring programs. Further research is needed to identify settings and scenarios in which POC or hybrid POC-Laboratory approaches are warranted for routine VL monitoring.
Rapid response services: an emerging knowledge translation approach for health system decision makers

Co-authors: Cristián Mansilla-Ministry of Health of Chile; Cristian Herrera-Ministry of Health of Chile; Tomás Pantoja-Pontificia Universidad Católica de Chile

Purpose: This presentation aims to present the experience of a rapid response service that is operating at the Ministry of Health in Chile, and showing how their products have contributed to the health policymaking process. Also, it will develop relevant discussion related to the impact of these services, and how to measure it.

Focus/content: On a daily basis, decision makers require urgent evidence-informed answers to a number of policy questions. Systematic reviews are the gold standard to provide evidence synthesis, but they usually require between 6 to 24 months to be carried out. In this context, rapid response services aim to improve evidence accessibility to decision makers, by significantly reducing the time needed to summarize the existing research. This presentation will show how a rapid response unit has been developed in Chile, generating a critical discussion about their role on the health policymaking process in any other country. Specifically, the full experience of this service will be presented including details and a critical analysis on: the use of resources (monetary and human resources), the governance (how this unit has been developed from a public institution), the procedures used to select and prioritize the themes to include in the rapid evidence syntheses, and how the initiative has contributed to the general objectives of a Knowledge Translation Platform. Finally, the presentation will show how this service has been institutionalized within the Ministry of Health, and give a further look at the utility and/or risks to set up a rapid response service in a public institution.

Significance: It is well known that health system decision makers need to rapidly answer to a number of questions. In this scenario, research evidence could be an especially relevant asset to answer these questions. Rapid response systems would produce an outstanding opportunity to give evidence-informed answers for urgent policy questions, remarkably helping to close the gap between research and policymaking, which is a main objective for knowledge translation mechanisms. In this context, discussions to present the experience of one unit in a Latin American country could be extremely valuable, since there has not been an extended discussion regarding the specific resources and processes needed to develop these initiatives.

Relevance and target audience: Health system stakeholders from low, middle and high-income countries, including policymakers, researchers, international evidence-to-policy organisations and NGOs.
Setting Research Priorities to Improve Population Health in Iran

Parisa Mansoori, Centre for Global Health Research, Usher Institute, The University of Edinburgh

Abstract Id: 568

**Setting Research Priorities to Improve Population Health in Iran**

Co-authors: Parisa Mansoori-Centre for Global Health Research, Usher Institute, The University of Edinburgh; Reza Majdzadeh-Knowledge Utilization Research Center, Tehran University of Medical Sciences, Tehran, Iran; Zhaleh Abdi-National Institute of Health Research (NIHR), Tehran University of Medical Sciences, Tehran, Iran; Igor Rudan-Centre for Global Health Research, Usher Institute, The University of Edinburgh; Kit Yee Chan-Centre for Global Health Research, Usher Institute, The University of Edinburgh

BACKGROUND: In 2015, it was estimated that the burden of disease in Iran comprised of 19 million disability-adjusted life years (DALYs), 74% of which were due to non-communicable diseases (NCDs). The observed leading causes of death were cardiovascular diseases (41.9%), neoplasms (14.9%), and road injuries (7.4%). Even so, the health research investment in Iran continues to remain limited. This study aimed to identify national health research priorities for Iran in the next five years by gathering the most prominent Iranian researchers, policy makers, funders, and other stakeholders to assist the efficient use of resources toward achieving the long-term health targets.

METHODS: We used the adapted Child Health and Nutrition Research Initiative (CHNRI) method. We identified 68 persons who were prominent researchers and academic leaders in Iran in the areas related to national health targets, and 48 of them agreed to provide the scores for the exercise. They scored 128 proposed research questions using a set of five criteria: feasibility, impact on health, impact on economy, capacity building, and equity.

RESULTS: The top 10 priorities were focused on the research questions of: health insurance system's reform to improve equity; integration of NCD prevention strategy into primary health-care; identification of cost-effective population-level interventions for NCD and road injury prevention; tailoring medical qualifications to better serve the needs of the nation; epidemiological assessment of NCDs in Iran by geographic areas; tracking the equality of distribution of health resources and services across the country; investigating the current and the future common health problems in Iran’s elderly and identifying strategies to reduce the consequent economic burden; assessing the status of antibiotic resistance in Iran and investigating strategies to promote rational use of antibiotics; assessing health impacts of the water crisis; and health systems research to replace physician-centered system with a team-based one.

CONCLUSION: These findings highlighted a consensus of Iranian prominent researchers and various stakeholders over the key research priorities that require urgent investment to generate information and knowledge relevant to national health targets and policies. The exercise should assist in closing the knowledge gaps to support both the National General Health Policies by 2025 and the health targets of the United Nations’ Sustainable Development Goals by 2030.
Julian Lunguzi, Parliament of Malawi
Abstract Id: 3816

The role of Parliament in achieving Sustainable Development Goals: A Case study of Malawi Parliament Population and Development Caucus

Co-authors: Juliana Lunguzi-Parliament of Malawi; Velia Manyonga-Parliament of Malawi; Madalitso Kazombo-Parliament of Malawi; Fred Kazombo-Parliament of Malawi

Background and purpose
Malawi Parliament established a Parliamentary Caucus on Population and Development in April 2017 to involve all Members of Parliament (MPs) advocate for the population agenda in Parliament. The caucus is a voluntary and non-political undertaking by MPs to address the country’s population and development challenges through budget allocation, representation, oversight and legislation to achieve the SDGs.

Content
Tonsure that parliament is responsive, inclusive, participatory and representative in decision-making to achieve the SDGs, Malawi Parliament launched the Parliamentary Caucus on Population and Development to promote advocacy and legislative reforms on Malawi’s population and development challenges (lack of access to health care and education). The initiative aimed at addressing Malawi's population and development challenges since the Parliamentary committee on health could not do everything alone. The formation of the Caucus provided an opportunity for the larger community in parliament to deliberate population and development issues in an inclusive and holistic manner. Regular caucus meetings with multi-sectoral stakeholders provided the MPs with evidence (data) to understand the demographic dividend and the need for increased budget allocation, oversight and legislations supporting SRHR, HIV and AIDS, tuberculosis, water and environment, and education.

Results
Since the launch, the parliamentary debate is characterised by all MPs, not only from Parliamentary Committee on health asking government for increased resources to population and development sectors for harnessing demographic dividend to achieve the SDGs. The Caucus provides an opportunity for MPs to have an in-depth understanding of the needs of their communities in health and development. Members of parliament understand that despite the prevailing challenges, Malawi stands a great chance to harness a demographic dividend if government invests in family planning to deal with population growth; quality education and public health. Consequently, with evidence, Members of parliament have managed to push for the increased allocation of the health development budget of 2017/2018 from MK16.3 billion to MK25.8 billion (37% increase). Resources allocated to family planning were ring fenced since members of parliament made a commitment to monitor 100% spending.

Significant for the subtheme
Achievement of SDGs health targets relies on all Members of Parliament to use their budget approving powers to ensure that relevant sectors are adequately funded. All Members of parliament should commit to monitor targeted interventions addressing the critical areas (family planning, drugs, equipment, HIV and AIDS, maternal health, NCDs, and infrastructure) to achieve the SDGs.
Ruben Manzo, OSDE  
Abstract Id: 671

**Equidad en salud y cobertura universal es un camino factible mediante la complementación público privada**

Co-authors: Ruben Ruben Manzo-OSDE

Ante la crisis del Estado de Bienestar la salud se instaló como un bien privado. Para romper con este paradigma debemos ver a la salud como una política de estado constituyendo un conjunto de valores e intereses comunes entre todos los actores políticos, es decir un piso normativo que minimice la confrontación y las relaciones de poder puro y viabilice la comunicación horizontal (consenso social). Que nos lleve a redefinir lo que entendemos por salud tomando a la APS ampliada como piedra fundamental para la costrucción del sistema que promueva el desarrollo de los servicios de primer nivel y la atención de los problemas de salud prioritarios presentes en los grupos más vulnerables con programas específicos (ligados a las condiciones sociales y ambientales, estilos de vida de toda la población etc.).

De la noche a la mañana no se pueda pasar de un sistema de salud multifragmentado a un único sistema de salud universal y federal. Para ello debemos establecer un modelo de transición acompañado de un financiamiento sustentable acorde a las necesidades de la población. Entendiendo que el dinero debe seguir al usuario y no el usuario seguir al dinero (financiamiento de la demanda).

Para ello es necesario construir un sistema de redes sociales (individuo, comunidad, institución) que se articule con una red intersectorial público privada logrando una participación multiactoral, horizontalizando la atención evitando la duplicación de los servicios. Teniendo como objetivo la atención integral e integrada, eficiencia productiva, con prestaciones de costo real conociendo para ello el perfil epidemiológico y su respectiva demanda. Mediante la fidelización y contención de los usuarios (contacto social), contratos únicos y centralizados con las prestatorias, y contratos programas con los médicos y las instituciones prestadoras.

Así vamos a proteger a los consumidores contra el riesgo financiero de gastos sanitarios, promoviendo la prestación con servicios sanitarios eficientes, siendo justo con los consumidores, con los profesionales mediante la libre elección del prestador.

Para ello se necesita una transformación profunda del hospital público (gestionar no es administrar) analizando costos para medir el producto sanitario mediante un conjunto mínimo y básico de datos, acompañado de un cuadro de mando integral que logre el equilibrio entre la razón de ser y los objetivos estratégicos. Creando centros de costos públicos y privados, una dirección de estadísticas y censos, una dirección de evaluación de tecnologías sanitarias con responsabilidad social del majo de los fondos públicos,
Pritpal Marjara, Population Services International
Abstract Id: 2640

**Strategic purchasing of family planning services from private sector providers by the government of India: a model for expanding Universal Coverage**

Co-authors: Pritpal Marjara - Population Services International; Vivek Sharma - Population Services International; Andrea Catherell - Population Services International

**Purpose:** To share lessons learned from strategic purchasing of family planning services in Uttar Pradesh (UP) in order to explore replicability for other services and scalability across the country.

**Focus/Content:** Access to quality and affordable primary health care is a major challenge for urban poor in India. While the private sector is a significant source of curative services in urban areas, it is underutilized by the urban poor for preventive services. This channel can be maximized to improve coverage of preventive services, such as family planning, by empaneling and accrediting private health care providers and health facilities. In 2015, Population Services International (PSI) designed a model to enable strategic purchasing of family planning services in Uttar Pradesh (UP), India which accounts for 26% of India’s FP2020 commitment to address unmet need for modern contraception. Using a market development approach, PSI identified key market entry barriers for private sector providers’ participation in government schemes which were tedious and lengthy accreditation and reimbursement processes compounded by lack of accountability and transparency. To address these challenges, PSI worked in partnership with the government of UP to develop a new comprehensive Government Order to clearly guide the private sector engagement in family planning. PSI supported the State Innovations for Family Planning Agency (SIFPSA) to serve as a Public Private Interface Agency. PSI and SIFPSA developed a web portal to facilitate private provider accreditation, empanelment, and reimbursement.

**Significance:** As a result, from 2016-2018 the government reimbursed $5.1 million to private facilities for family planning services through an online system, which was the first of its kind. The number of private facilities accredited to offer family planning services increased from 10 facilities in 2015-16 to 750 facilities in 2016-17; the same private providers received lifetime empanelment for providing family planning services for the first time in the state. The State level management dashboard gives a real time status to review and monitor the progress of the scheme and make data-driven decisions. There has been a significant reduction in time taken for reimbursement from 120 to 55 days.

**Relevance:** Setting up a transparent and accountable online systems helps unlock government funds for the private sector which, in turns, improves service delivery access and utilization for urban poor. Hence, strategic purchasing of preventive services like family planning from private sector offers a model for achieving universal health coverage

**Target audience:** National and State Governments, donors, and implementers
Improving a health system using an innovative approach to rapidly improve mass drug administration coverage and district level service delivery performance to eliminate Lymphatic Filariasis

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Background: Lymphatic filariasis (LF) elimination requires annual administration of preventive medication to >80% of the eligible population living in endemic districts. Sub-optimal coverage allows continued parasite transmission, with consequential disease and disability. WHO recommends verifying reported coverage due to incorrect denominator/numerator. Verification must occur at decentralised levels where mass drug administration (MDA) takes place. This paper presents a novel rapid verification approach, and it demonstrates the support it provides for strengthening the ability of countries to respond to the barrier it identifies.

Methods: Mozambique and the Democratic Republic of Congo (DRC) conduct yearly MDA campaigns distributing Ivermectin and Albendazole for LF. To verify reports and assess the achievement of targets (80% coverage), both countries conducted rapid probability surveys using Lot Quality Assurance Sampling (LQAS) (n=1102) in 2015 and 2016 in 50 districts. The surveys also measured reasons for not taking the medication, place the medication was taken, information sources, and knowledge about diseases prevented. Survey data was weighted by district population size to calculate provincial coverage, and compared with reported data.

Findings: Provincial estimates using probability samples were five to 10 percentage points lower than reported coverage and identified four of the 50 districts inadequately covered which were successfully re-treated (3:Mozambique, 1:DRC). The surveys identified absence from home during the MDA (38%, 50% respectively) as the main reason for low performance. Probability sampling applied globally is an alternative to verify reported MDA coverage—a result with implications extending beyond LF to other diseases. LQAS supported prompt, targeted action by both national programmes to avoid failure of the campaign and continued parasite transmission, averting &gt;61,557 DALYS in underperforming districts. The application of this novel method led both programmes in the DRC and Mozambique to develop locally appropriate response to increase MDA coverage and remove the barriers that this study identified.
Access to contraceptives: political strategies and compared health systems. The cases of Argentina and Brazil

Despite the situation having improved in the last years, there is still a significant number of people without access to contraceptives in Latin America. This problem has an important impact especially when we refer to women health´s indicators (high morbi-mortality).

In the case of Argentina, the fragmentation of the health system and the different ways of financing medicines create very unequal ways of access to the health services in general and to the contraceptives in particular. In Brazil, the medicines financing depend on the 3 levels of government and in the practice this is very complex too.

Argentina and Brazil implemented strategies to promote the access to medicines in general and National Sexual and Reproductive Health Programs (with focus in promoting the access to contraceptives). Nevertheless both countries still need to strengthen the mechanism to address this problem.

The objective of this research is to understand how two different (in terms of institutional design) health systems address the problem of accessing to contraceptives. And to analyse the relationship between the medicines policy and the sexual and reproductive health policy in Argentina and Brazil in a compared perspective.

Methodology: this is a qualitative – compared public policy analyses.

We considered a specific period of time: 2003-2015. In that years Argentina and Brazil implemented medicines policies and sexual and reproductive programs too.

In order to achieve the comparison we developed 3 matrix with specific dimensions: one to compare the health systems; other to compare the National sexual and reproductive health programs and the last one to compare the medicines policies with focus in contraceptives.

We review and analysis secondary source and we made 6 semi-structure interviews with stakeholders from both countries.

The results show that the ways of Access to contraceptives presents own specific characteristics and different from other essential medicines and there are differences among this 2 countries. We identified 6 key elements in the creations of that ways of access: 1) the influence of the political process; 2) the relation among the ways of access and the institutional design of the health system; 3) The participation of new actors (outsiders from the sanitary sector) in the design and implementation of this strategies; 4) A feminization of the contraception; 5) the ignorance of the right to free contraception (in both countries); and 6) The decisions taken from the medicines policy influenced more than the decisions of the sexual and reproductive programs.
Researchers’ perspective in using life histories to understand recruitment and deployment policies: an experience from Timor-Leste

Co-authors: João Soares Martins-Universidade Nacional Timor Lorosae; Alvaro Alonso-Garbayo-The Liverpool School of Tropical Medicine; Artur Natalino CR Araujo-Universidade Nacional Timor Lorosae; Joaquim Gregorio de Carvalho-Universidade Nacional Timor Lorosae; Natalia Pereira-Universidade Nacional Timor Lorosae; Etelvina Jose Tilman-Universidade Nacional Timor Lorosae; Sara Pereira-Ministry of Health Timor-Leste; Maria Paola Bertone-The Liverpool School of Tropical Medicine; Vicente de Paulo Correia-Universidade Nacional Timor Lorosae; Tim Martineau-The Liverpool School of Tropical Medicine

Background: Life histories have been used by researchers to study the experiences and career progression of health workers in post-conflict and crisis setting countries. Building on the ReBUILD consortium’s experience of using this method in these contexts, this paper looks at the perspective and experience of researchers in using life histories during their assignment interviewing health workers in Timor-Leste. Timor-Leste, a post-conflict country, faced enormous challenges in health sector development. Rebuilding Timor-Leste’s health workforce began with a recruitment of around 800 health workers under UN Transition Administration in 2001 and now the health workforce grows to nearly 5000 staff. Health workforce is a key to achieving SDG objective of ‘leaving no one behind” as it contributes to a stronger health systems that can deliver health for all. This study is jointly undertaken by the Liverpool School of Tropical Medicine and the Universidade Nacional Timor Lorosae.

Methods: This study combines Researchers’ reflections and a Focus Group Discussion with Research Assistants (RAs). Firstly, Researchers were asked to reflect on their own experience in using life histories to gather data/information surrounding recruitment policy and practice that health workers went through. Secondly conducting FGD to 4 RAs who used life histories with health workers and was facilitated by the lead-researcher for the ReBUILD. RAs were asked to reflect on their experience in using life histories to analyse the policies of recruitment on the deployment, identify the advantages and disadvantages of using life histories as well as their suggestion on this method.

Results: Despite the reluctance of researchers in using life histories during their first interviews life histories method was adopted in the subsequent interviews after some reflection facilitated by lead researchers. The reluctance was primarily due to unfamiliarity with the method. Generally everyone in this FGD agrees that life histories are a good method to explore the experience of health workers and their perspectives relating to recruitment and deployment policies. The method allows researchers to understand individual health workers’ stories and experience, their career progression and some sensitive matters such as low salaries and inadequate working conditions.

Discussion and Conclusion: Using life histories in research for understanding human resource policies is a good and appropriate tool. Study Participants needs information about the time/date and the site of interview well before. Finding a convenient venue for the interview is sometimes challenging, but is crucial for ensuring the quality of information particularly with sensitive life events.
Vijayashree Mathad, Karnataka Health and Family Welfare
Abstract Id: 1560

ASSESSMENT OF MORBIDITY, GROWTH AND DEVELOPMENT DURING FIRST YEAR OF LIFE: A LONGITUDINAL STUDY IN A RURAL COMMUNITY

Co-authors: Vijayashree Shivprasad Mathad-Karnataka Health and Family Welfare; Shivprasad Shivasharana-Gulbarga Institute of Medical Sciences, Kalaburagi; Niranjana Mahantttishe-KLE University, Belagavi; Vijaya Ashok Naik-KLE University, Belagavi

Background: About 2.92% of Indian population is constituted by infants.1 Infants form a vulnerable group. In India, fifty percent of them are underweight and 1/3rd are premature2. Hence they are susceptible to infections. Growth and development is very crucial component among infants as it depicts the physical and mental development of the child.

Objectives: To study morbidities (ARI, Fever and Diarrhea) growth and development during first year of life. To study the impact of type and episodes of morbidities on growth and development during first year of life. To assess socio-demographic, biological and cultural factors influencing morbidity, growth and development during first year of life.

Methodology: A Longitudinal study is carried out in rural community of Kinaye, Vantamuri and Handignur PHC. Study population constituted of Babies born during May 2013-March 2014. Sample size was calculated using the formula N = (Z 1-α)2 x p(1-p)/ d2 where Prevalence of stunting(p): 28.8%, Z 1-α: 1.96. Tolerable error (d): 3%, Sample required= 875. Adding 10% attrition rate sample Size was 962. Tools used were; Pre designed semi structured, pre tested questionnaire. Growth was measured using self developed and patented indigenous Infantometer, Standard weighing machine and Measuring Tape. Trivandrum developmental screening chart was used for screening development. Multiple Regression Analysis, Logistic Regression and factorial analysis were used to develop models for morbidity, growth and development during first year of life.

Results: Incidence of morbidity was 10.3 /child-year. Diarrhea (2.9/child-year), RTI (3.4/child-year) and Fever (2.1/child-year). Prevalence of under nutrition increased after 6 months of life. Overall prevalence of stunting being (36.3%), underweight (31.6%) and that of wasting (21.3%). The development delay in terms of gross motor skills was seen among 13.8% infants. In the multivariate poisson regression model, factors such as exclusive breast feeding for 6 months, female gender, exhibited significant protective effect against overall morbidity. At the age of 12 months as per the multivariate analysis delayed initiation of breast feeding, older age of parents, male sex were independently associated along with incidence of morbidities and LBW. The risk factors associated with developmental delay were increased incidence of RTI and diarrhea, maternal illiteracy and LBW.

Conclusion: Our longitudinal study highlights the importance of complete antenatal care, proper feeding practices, literacy and birth weight of infants as a contributory factors for morbidity and developmental delay. If one can diagnose developmental delay in early stages of development, early intervention can reduce long term sequel.
Scoping study on the use of community volunteers and smart phone based tools, in community cancer screening in a predominantly agrarian region of India

Co-authors: Philip Mathew-Pushpagiri Institute of Medical Sciences and Research Centre, Kerala, India; Anil Kumar-Veliyanad Community Health Centre, Kerala, India; Sairu Philip-Government TD Medical College, Kerala, India

Background: The demographic and epidemiological transition forces the health systems in developing countries to reorient and deal with the emerging issues of non-communicable diseases (NCDs), including malignancies. Community screening for NCDs and their risk factors, is a highly resource intensive exercise. This calls for simple and cost-effective technology solutions, which can help in community based screening of diseases. The current study was done to evaluate the technical feasibility of using a Geographic Information System enabled, smart phone based system for population based screening of malignancies.  

Methods: The study was done in Veliyanad Block, an administrative unit in the state of Kerala, India. Kobo Toolbox, a freely available field survey software was used for the purpose. A questionnaire in local language, which had sections on basic socio-demographic characteristics, possible symptoms of cancers and various risk factors for malignancy, was loaded on to the smart phones of trained volunteers. The volunteers were mostly from women’s self-help groups; and they went door-to-door to all the households in the area. Those who had any malignancy in the past were enrolled into the palliative care system and the participants who reported possible symptoms of cancer were called for a check-up by a team of oncologists and pathologists.  

Results: A total of 39,293 adults were screened over a period of 2 months in 2017-18. Around 218 participants reported that they had suffered from any form of malignancy, and this translates to a prevalence of 555/100,000 adult population. Further, 608 participants reported an abnormal lump, 283 had recent change in wart or mole, 78 had oral ulcers or dysphagia, 75 reported non-healing ulcers and 44 had abnormal bleeding from any site. A total of 902 participants were called for check-up by expert teams. A geo-spatial map was also drawn to find out any kind of clustering or exposure to environmental risk factors. Around 91% of the volunteers had positive opinion on the technique and over 80% said that it was lucid. 

Conclusion: The prevalence of malignancy in the area was found to be higher than national statistics, but only a prospective community cohort can prove a higher disease burden. High penetration of smart phones even in rural areas, give us a potent platform for using it to achieve healthcare goals. In the study, a simple software could help the healthcare providers to effectively target the cancer screening services to those who had medical indications for it.
Poster Abstracts

Constancia Mavodza, Center for health and Gender Equity
Abstract Id: 747

Gender analysis: sub-Saharan African nurses’ migration experiences- a systematic review

Co-authors: Constancia Mavodza-Center for health and Gender Equity; Maylene Shung-King-University of Cape Town; Veloshnee Govender-WHO

Background

In sub-Saharan Africa (SSA) as in other parts of the world, health workers, including nurses are the backbone of health systems and critical for achieving UHC and the SDGs. Nurses are the most migrant of health workers and are pre-dominantly female. In addition to the insufficient and unreliable data on nurse mobility, migration and its actual and potential effects, there is also limited research and understanding of the potential role of gender as an influence on decisions to migrate and the experience thereof particularly in the context of migrating SSA nurses. The aim of the systematic review was to apply a gender lens, describe migration and career trajectories of SSA nurses which in turn would identify research and policy gaps.

Methods

A systematic review methodology was conducted in eight electronic databases to extract full text, English-only articles published between 1995 and 2017. Selection criterion included those articles focusing on SSA, nursing and migration. Out of twenty-nine articles which met the selection criterion, only seven explicitly focused on gender as a key construct for understanding migration of SSA nurses. A gender power relations framework which includes dimensions of access to resources, division of labour and decision-making abilities was applied to understand the migration experience of SSA nurses. Emergent themes included recognizing SSA nurses as women, as migrants and as professionals.

Findings

By recognizing gender as part of social context and using identity stratifiers, this review found that during migration, SSA nurses’ dual roles as nurse and mother resulted in reconfigured gender roles; balancing migrant-nurse-mother lives reinforced global care chain networks that disadvantage career progression; migration status negatively impacted access to career advancement resources; upward social mobility in origin countries was at the expense of deskilling in destination countries; and interacting migrant-racial discrimination generated exploitation.

Conclusion

The review underscored and revealed gaps in the understanding of the influence of gender on migrant nurses from SSA. More research and evidence is needed to support more effective management of nurse mobility and human resource planning- training, retention, motivation, supporting career progression and promotion. There is a need for more research that applies gender analytical frameworks on understanding the experiences of migrant male nurses; nurses who remain and may have to cover the gap for those who left; nurses in different geographical regions to allow comparisons in order to inform and support global polices like the WHO Code on international recruitment of health personnel.
Community participation to improve maternal and newborn health in rural Bangladesh: Effect of a community-based intervention package

Co-authors: Tapas Mazumder-icddr,b; Janet Perkins-EdM; Ahmed Ehsanur Rahman-icddr,b

Background: Despite improvement in recent decades, maternal and newborn mortality in Bangladesh remain high. Community participation for improving maternal and newborn health (MNH) has been highlighted as a critical area of action in the Global Strategy for Women’s, Children’s and Adolescents’ Health. A community-participatory intervention package was initiated in 2009 in Netrokona district by the NGOs Enfants du Monde and PARI Development Trust to engage individuals, families and communities to improve maternal and newborn health (MNH) and increase access to health services. In this article, we present the effect of the intervention package on MNH capacities and practices between 2014-2016.

Methods: A quasi-experimental design was adopted to evaluate the effect of the intervention package. A cross-sectional household survey was conducted in the intervention and comparison sites at baseline in 2014 and at endline in 2016. A total of 725 women were interviewed at baseline (intervention n=444; comparison n=281) and 727 at endline (intervention n=442; comparison n=295). A total of 317 of their husbands were interviewed at baseline (intervention n=178; comparison n=139 from the comparison site) and 731 at endline (intervention n=440; comparison n=291). Propensity score matching (1:1) was performed and the subsequent analysis was restricted among 235 matched women at baseline and 217 matched women at endline. Descriptive analyses were performed for the covariates for matching. Bivariate analyses between baseline and end-line were done for reporting women and their husbands’ knowledge regarding pregnancy and childbirth, BPCR practices and utilization of MNH services.

Findings: There was a significant increase in awareness of danger signs during pregnancy, birth and following birth among both women and men, as well as an increase in awareness of rights related to MNH. There was also a significant increase in birth preparedness and complication readiness (BPCR) practice among women and men in the intervention site. In relation to use of skilled MNH services, there was a significant increase in the percentage of women initiating antenatal care (ANC) early, attending at least one ANC contact and attending at least four ANC contacts. No notable improvement was observed in birth in the presence of a skilled attendant or use of postnatal care.

Conclusion: We conclude that the community-participatory intervention package was effective in strengthening MNH capacities at the community level. This may have translated into increase use of skilled care during pregnancy.
Applying an intersectionality lens to examine health for vulnerable individuals following devolution in Kenya

Co-authors: Rosalind McCollum-Liverpool School of Tropical Medicine; Miriam Taegtmeyer-Liverpool School of Tropical Medicine; Lilian Otiso-LVCT Health; Tim Martineau-Liverpool School of Tropical Medicine; Rachel Tolhurst-Liverpool School of Tropical Medicine; Sally Theobald-Liverpool School of Tropical Medicine

Background

Power imbalances are a key driver of avoidable, unfair and unjust differences in health. Intersectionality approaches can provide a 'lens' for analysing how power relations contribute to complex and multiple forms of health advantage and disadvantage. These approaches have not been widely used to date to analyse health systems reforms, such as devolution, which shift the balance of power. While the objectives of devolution often focus on improved equity, efficiency and community participation, past evidence demonstrates that unless authorities actively seek to transform existing power relations, norms and structures, the needs of vulnerable people will continue to be neglected.

Methods

We carried out a mixed qualitative study in post-devolution Kenya, between March 2015 and April 2016, involving 269 key informant and in-depth interviews from across the health system in ten counties, 14 focus group discussions with community members in two counties and photovoice with nine young people. We adopted an intersectionality lens to explore implications of social dimensions relating to experience of power and ill health, opportunity for participation in priority-setting and agency to use available health services.

Results

We found that longstanding social forces and discriminations, limit the power and agency an individual can exercise, depending on their unique circumstances. Social dimensions shape social determinants of health, influencing an individual's exposure to risk or ill health by nature of the environment within which they live, the occupation they hold or the existing social norms. For example, youth photographers described that living within an informal settlement, being an adolescent and female, increased a person's risk of experiencing gender based violence. Limited power to influence health services often compounds multiple inequities in the social determinants of health shaped by intersecting disadvantages such as those related to poverty, occupation, gender, age and geographic location. A range of policy measures have been introduced to encourage participation by typically 'unheard voices', including the introduction of public participation meetings which should allow opportunity for the participation of women and youth. The opportunities afforded by devolution, however, have yet to be used to challenge or reform the social norms, and intersecting power relations which contribute to discrimination and marginalisation.

Conclusion

If key actors in the devolution process are to ensure progress towards universal health coverage, then there is need for intersectoral policy action to address social determinants and to identify ways to challenge and shift power imbalances in priority-setting processes.
DESIGN OF A TECHNOLOGY PLATFORM FOR KNOWLEDGE SHARING AMONG HEALTH PROFESSIONALS TO IMPROVE MATERNAL AND CHILD HEALTHCARE

Co-authors: Obsa Amente Megersa-Wollega University; Rahel Bekele Tefera-Addis Ababa University; Abiy Seifu Estifanos-Addis Ababa University

Introduction: Knowledge is a valuable asset for individual as well as organizations to be successful in this demanding global economy. The change of information into knowledge is mainly due to the effort of human cognitive capacity. Knowledge Management (KM) is therefore a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance. KM includes processes like knowledge capture and/or creation, knowledge sharing and dissemination, and knowledge acquisition and application.

Aim: The major aim of this project is to explore the knowledge sharing status and design knowledge sharing technology platform for health professionals working on maternal and child healthcare unit.

Methods: A qualitative cross sectional case study design was conducted to gain insight; explore the depth, richness, and complexity inherent in the topic of interest. The hospital technical staffs working in MCH unit were included as study participants. An in depth interview guide was used to collect qualitative data. The collected data was analysed using the thematic inductive analysis method.

Results: In this project/study the overall findings show that knowledge sharing brings common understanding among professionals, its application depends on resource of the health facility and professional’s knowledge, skill and attitude (KSA), is facilitated by development of technology platform and automating the hospital system in general and it also need committed management body for its execution. Based on the study, appropriate sample content development and technology platform using word press software for knowledge sharing among professionals at MCH unit is designed.

Conclusion: The findings highlight the on-going educational, informational, infrastructural and other interventions to address the issue of knowledge sharing among professionals. In addition, appropriate recommendations are forwarded to the respected bodies.
Zika and women’s health: the gaze of feminist groups and mothers’ associations on the challenges to health system management in Brazil

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The Zika Congenital Syndrome (SCZ) epidemic that has occurred in recent years in Brazil revealed, besides the imperative to ensure care for children’s cognitive and motor well development, the need to understand social impacts and consequences for women rights and reproductive planning. Considering the importance of the influence of social organizations in the process of formulating and reviewing public policies, this work aimed to demonstrate how associations of mothers and feminist groups perceive the State role regarding the needs of women in the context of the Zika / SCZ epidemic.

We used recordings and field notes from twelve meetings with feminist groups and associations of mothers of children with CZS. The meetings happened for different reasons (research seminar, public hearings and thematic workshops). The material was analyzed using a qualitative approach, based on grounded theory. The aim was to identify how these different groups use their actions to stress the role of State regarding the needs of access to health services and social assistance, especially related to women’s lives.

The main results showed that each approach has different yet complementary demands. On one hand, the mothers of affected children recognized the lack of structural support in order to facilitate access to health services for their children’s care. In addition, they identified a paucity of reliable and intelligible information about the epidemic. On the other, feminist groups highlighted the need to provide information to broaden sexual and reproductive rights. Moreover, they call attention to the need to intersect race, class and gender, which stress the broader difficulty women face to access health services and act autonomously. Both groups recognized that lack of information on civil rights, and the absence of public investments in infrastructure was also part of the problem related to the epidemic.

We argue that public campaigns focus too much on domestic care as the main way to avoid mosquitoes. However, this strategy has moral and practical consequences since they assume a centrality of care related to women and the mother-baby linkage as destination. We call attention to the asymmetries and inequalities between genders and stress the need to challenge the Brazilian health policies, to take part in this scenario. In this sense, the State should be hold responsible for caring for its citizens and the environment and in the case of the Zika epidemic, the feminists and the mothers of affected children are speaking the same language.
Susan Mende, Robert Wood Johnson Foundation
Abstract Id: 2060

Transforming Care for People for Complex Health and Social Needs- insights from the school of hard knocks

Co-authors: Susan Mende-Robert Wood Johnson Foundation

This presentation will share an analysis of findings and insights from a literature review; series of national key informant interviews; scan of successful approaches; pilots and convenings on improving systems for people with complex health and social needs. Better care of people with multiple and intertwining needs - the sickest 5 percent of patients, who account for 60 percent of costs, yet receive fragmented, poor-quality care—is key to realizing high value integrated care that addresses people’s real needs. When people with chronic conditions lack access to ongoing coordinated care, they are at risk of re-experiencing trauma and entering the revolving door of repeat emergency department visits, hospitalizations and exacerbation of social challenges such as homelessness. The continuing pressure to reduce health care spending and improve value for this population point to the need for a community-wide approach to health and social system transformation. An analysis of the literature and lessons learned from current approaches identified critical gaps in improving care with a particular focus on social determinants of health and opportunities to work with multiple stakeholders to go beyond improving care for individuals to changing systems. This work led to the identification of six key domains to support more accessible person and community-centered equitable care: (1) care model enhancements; (2) financing and accountability; (3) data and analytics; (4) workforce development; (5) governance and operations; and (6) policy and advocacy, all with an underlying commitment to patient and community co-design and addressing equity. The discussion will include experience in approaches such as hot spotting, insights from community groups working with local stakeholders, innovative strategies such as braided funding, aligned accountability, and emerging strategies in transforming the complex care workforce. These findings and real life insights will be useful to policy makers; program planners; providers; payers and patients and communities to support adaptation, replication and maximizing community strengths in improving lives of people with complex needs.
Private Sector Engagement for Tuberculosis Control: Evidence from Uttar Pradesh, India

Background Though India has been engaged in the fight against Tuberculosis (TB) over the last 50 years, one out of every four TB patients is from India and there are more than a million ‘missing’ cases every year that are not notified, undiagnosed or inadequately diagnosed and treated in the private sector which accounts for 80 percent of treatment. Uttar Pradesh has high rate of TB prevalence and during 2015-16, 337 persons per 100,000 population were estimated to have medically treated TB, i.e., 7 lakh diagnosed cases (NFHS, 2015-16).

Objectives The objectives of the intervention included: - enhancing capacity of private sector to improve treatment, improve notification and enhance awareness among general public on TB in Meerut, Uttar Pradesh.

Methodology and Approach In partnership with Indian Medical Association and Revised National TB Control Program, Meerut, a mixed methodology approach was adopted to understand awareness levels among private doctors and patients. Innovative time-saving tools for notification of TB cases were developed. Additionally, capacity building of doctors and support staff were undertaken. Communication activities were carried out to enhance knowledge.

Findings Notification in the district was abysmally low and with continuous engagement case notification increased considerably and played a substantive role in bridging the gap between private and public sector. Interactions with TB patients revealed that most patients initially sought treatment from local drug stores, chemists, local doctors before seeking services of specialists. Most patients felt that cost of treatment at private facilities were quite high and average out of pocket expenditure was INR 4000-5000 including transportation costs. High costs were incurred on doctors’ fees and medicines. 3 out of 10 patients were not aware about signs and symptoms. Most patients reported persistent cough as symptom. Patients opined that TB is serious disease but curable. Though patients were counselled on dosage and medicine schedule they were seldom counseled about side effects/contraindications, nutrition intake during illness and treatment. Patients agreed that stigma and discrimination was prevalent, hence, patients were unwilling to disclose their status.

Recommendations This is a non-incentivized model and could be adopted and replicated. Another overwhelming challenge among patients seeking care from private providers remains delayed diagnosis, inadequate treatment and high treatment cost. Hence, there is a need to enhance engagement with the largely unorganized and unregulated private sector through stringent policies and innovative strategies with explicit frameworks for enhancing surveillance, monitoring, notification, regulation and quality assurance.
Do High-Tech and High-Touch platforms work for NCD management in LMICs? Digital health and quality improvement methodologies to augment hypertension and diabetes management in Nigeria.

Co-authors: Nneka Mobisson-mDoc; Eni Balogun-mDoc; Lovelyn Sekoni-mDoc

Premature mortality rates from non-communicable diseases (NCDs) are growing exponentially and are higher in sub-Saharan Africa than the rest of the world. In Nigeria, 20% of the population aged 30-70 are dying prematurely from NCDs such as Diabetes and Hypertension largely because they have limited access to care, many providers aren’t skilled in NCD management. WHO estimates 35% of adults have hypertension and Diabetes prevalence is 4-11%.

Digital health technologies are increasingly being used to support management of NCDs. In Africa there is a dearth of literature on the use of the mobile phone for NCD support. This paper outlines the digital solutions being deployed in Lagos, Nigeria as part of our pilot implementation of a virtual Hypertension and diabetes self-management program and describes the integration of peer navigators and quality improvement methodologies to drive engagement.

Methods: A total of 100 participants with Type 2 Diabetes were enrolled into the 14 week activation phase of the CompleteHealth™ program from January to February 2018. Each participant is assigned to a virtual coach-led multi-disciplinary team who co-creates health goals based on risk assessments focusing on WHO’s modifiable risk factors – nutrition, activity, smoking and alcohol intake. Digital health tools were provided to patients such as patient health portal, glucose and Blood pressure diary tracking and medication reminders. Health providers from the facilities where patients went for treatment have also been trained in diabetes and hypertension care and use of the platform. These providers have been enrolled into the Project ECHO MQN Quality Echo for additional education on quality improvement. Data were collected at baseline, with weekly data reviews for rapid-cycle testing and iteration. Monthly summaries of patient’s engagement and outcomes will be shared with the in-person healthcare provider teams.

Results: In the early stages of pilot implementation, patient uptake and engagement has been high. Health providers at the selected facilities where patients receive care have demonstrated increases in knowledge in both diabetes and hypertension management and quality improvement methodologies. Comprehensive process and outcomes data will be available at the conclusion of the pilot activation phase in May, 2018.

Conclusion: In low and middle income country settings, digital health tools with peer navigators can address the information asymmetry that often besets patients, empower and nudge them to do the right thing. Designing these tools requires co-creation and co-support of the very patients that use them to facilitate engagement and positive impact on outcomes.
Dialogue Model: A structured, community-participatory, communication intervention to promote uptake of maternal, newborn and child health services in Matuga sub-county, Kwale, Kenya

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Background: A community-participatory approach is important if public health interventions are to remain relevant in the long-term. We implemented a structured, community-participatory, communication intervention to promote uptake of maternal, newborn and child health (MNCH) services in Matuga sub-county, Kwale, Kenya. The Dialogue Model (DM) sought to promote positive, individual behavior change through community-led discussions around adoption of effective health interventions.

Methods: We trained community health volunteers (CHVs) to conduct monthly DM sessions in 12 community units (CUs) associated with 10 out of 19 (53%) health facilities (HFs) in Matuga. The total catchment population served by these HFs was 25,326 of which 6,540 (26%) constituted women of reproductive age (WRA). We conducted a paired sample, one-tail, t-test to compare the number of WRA taking up family planning (FP), antenatal care (ANC) and facility-based delivery pre- (January – December 2013) versus post- (January – December 2015) intervention implementation.

Results: A total of 570 DM sessions were held between October 2013 and December 2015. The median [interquartile range (IQR)] number of DM sessions held per HF per month was 2 (1-3). In these HFs, we found a significant difference in the number of WRA taking up family planning (FP) pre- (Mean (M) = 971; Standard deviation (SD) = 157) versus post- (M = 1,252; SD = 617); t (17) = -0.986, P = 0.03) as well as facility-based deliveries pre- (M = 190; SD = 152) versus post- (M = 307; SD = 286); t (15) = -0.808, P = 0.03).

Conclusions: A structured, community participatory, communication intervention led to an increased uptake of FP and facility-based deliveries in a rural Kenyan setting. This approach is useful in addressing demand-side factors for enhanced uptake of health services by providing communities with a stake in influencing their health outcomes.
Amélie Mogueo, Ecole de Santé Publique de l'Université de Montréal
Abstract Id: 3823

**Autonomisation des patients dans la lutte contre les maladies chroniques non transmissibles en Afrique subsaharienne : Une revue systématique**

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Depuis la conférence d'Alma-Ata en 1978, l’autonomisation des patients a évolué comme l’une des stratégies de promotion de la santé dans la Charte d’Ottawa de 1986, et de nos jours comme l’un des principes généraux du plan d’action mondial de l’OMS pour la prévention et la lutte mondiale contre les maladies chroniques non transmissibles (MCNT). Toutefois, malgré ces multiples contributions à l’amélioration de la qualité des services et soins de santé, très peu d’évidences existent à ce sujet dans les pays d’Afrique subsaharienne (ASS). Pourtant, sur 63% du taux de mortalité mondiale due aux MCNT, 80% proviennent des pays à revenu faible et intermédiaire, avec un taux de croissance plus élevé en ASS comparativement au reste du monde. L’objectif de la communication est de présenter comment les interventions existantes au sein du système de santé des pays d’ASS contribuent à autonomisation des patients ?


Les résultats nous nous révèlent que plusieurs interventions ciblant l’autonomisation des patients ont été mises en œuvre en ASS depuis le début des années 2000, pour contrôler, surveiller et prévenir les MCNT, basées uniquement au niveau micro. Il s’agit surtout des interventions basées en milieu clinique (80%), qui cible la gestion des cas, dans une approche individuelle. Elles ciblaient principalement les maladies cardiovasculaires (42%), le diabète (23%), les cancers (15%), les maladies respiratoires (9%) et autres (11%). Toutes ces interventions définissent l’autonomisation des patients comme un processus qui leur permet d’avoir un meilleur contrôle sur leur propre santé, ce qui passe par l’apprentissage, le contrôle et la signification. Toutefois, aucune étude n’a évalué les trois niveaux, seul l’apprentissage (80%) et le contrôle (50%) ont été pris en compte dans ces interventions, sans toutefois toutes couvrir toutes les dimensions.

Les interventions ne doivent pas seulement cibler l’autonomisation des patients au niveau micro, mais elles doivent impliquer les patients dans le processus de prise de décision au niveau organisationnel (mêso) et systémique (macro).

Le système de santé en ASS reste très paternaliste, et les différentes approches qui concourent au développement de l’autonomisation des patients sont très peu valorisées (soins centrés sur le patient) ou inexistante (patient-partenaire).
VARIABILITY OF MEDICINE PRICES IN HEALTH FACILITIES AND PHARMACY OUTLETS IN NORTH-WEST NIGERIA: A CHALLENGE FOR EQUITABLE HEALTH SYSTEMS FOR ALL

Co-authors: Shafiu Mohammed-Ahmadu Bello University; Ibrahim Bashar Mohammed -Ahmadu Bello University

In resource poor settings, there is need for consideration of medicines pricing related to demand and supply. Government and health-care-providers should consider this pricing most especially during prescription of medicines to ensure accessibility and affordability by the patients or consumers. High cost of medicines continues to be a challenge in the health care system of Nigeria because majority of the citizens are either less-privileged or poor. The objectives of this research study are to investigate the prices and availability of medicines as they vary among the different health facilities and pharmacy outlets. Furthermore, it examines the differences in price of innovator-brand products and generic equivalents.

This study was conducted between July to August 2015. A purposive sampling was used in selecting four categories of facilities including public (20), private (20), pharmacy (20) and patent vendors (20) within Zaria-Kaduna, with a total of 80 structured questionnaire administered. This sampling was carried out to enable balanced representation of the facility/ premise categories. A total of 20 medicines were selected from the World Health Organization and Health Action International (WHO/HAI) manuals, which were linked to the Nigerian National Essential Medicine List. For each medicine, three products were used including the innovator-brand (IB), the most-sold-generic (MSG) and the lowest-price-generic (LPG) equivalents. All data collected were analyzed using SPSS version 20 software, and presented as tables and charts.

There was low availability of IB in all the sectors except in pharmacy outlets (51.8%). Generic medicines were generally more available in public (53.2%), private (52.9%), and patent vendors (57.8%). The prices of most medicines in public clinics were almost identical with those in pharmacy outlets. Private clinics showed a higher price variability of 150-200 times more than public clinics. IB was found to cost 150-300 times more than the MSG, and 200-500 times more than the LPG equivalents. There is price variability in medicines among the different sectors but is lesser between public clinics and pharmacy outlets. Considering the price of medicines in private clinics, the generic equivalents were priced at twice the cost found in either the public clinics or pharmacy outlets. This means that although private health clinics mainly procure generic medicines, they do not allow their patients to enjoy the benefits of generic prices. Generally, the most available products are the generic equivalents among all the facilities. Pricing policy could assist in minimizing wider variability among the various health sectors.
Strengthening the science and ethics of health policy and systems research (HPSR): our experience with embedding ethics reflection sessions into diverse HPSR studies

Co-authors: Sassy Molyneux-KEMRI-Wellcome Trust; Jacinta Nzinga-KEMRI-Wellcome Trust; Rita Wanjuki-KEMRI-Wellcome Trust; Scholastica Zakayo-KEMRI-Wellcome Trust; Maureen Kelley-University of Oxford; Benjamin Tsoka-KEMRI-Wellcome Trust; Edwine Barasa-KEMRI-Wellcome Trust; Vicki Marsh-KEMRI-Wellcome Trust; Lucy Gilson-University of Cape Town

Purpose: There is a growing interest in the ethics of Health Policy and Systems Research (HPSR), including calls for more conceptual and empirical work to contribute to discussion and debate. We will contribute to filling this gap, with a focus on the ethics issues and dilemmas experienced over the course of the research, post ethical approval. This is important: the focus in much of our training and shared experience tends to be on working towards and ensuring ethical approval, whereas many of the ethics issues and dilemmas that keep us awake at night emerge over the course of doing the research in contexts of inequity and vulnerability, and making sure the research has value once it has ended.

Focus/content: We will share the theory behind introducing ethics reflection sessions into our studies, and experience of doing so. In so doing we will draw on three very different case studies:

a) our learning site work in Kenya and South Africa in which we as researchers are embedded in the health system we are studying; where we have been working collaboratively with health system managers over the last 5 years to understand and strengthen day-to-day health system governance.

b) Multi-disciplinary health services research on neonatal care in hospitals in Kenya, which includes ethnographic work on health worker-parent relationships in hospitals, and

c) Health system research elements of an international Childhood Acute Illness and Nutrition Network (CHAIN). CHAIN is an observational multi-site cohort study looking at determinants of child survival during and after hospital discharge for malnourished children aged 2 to 24 months, with the overall aim of developing interventions to reduce mortality.

We will illustrate some of the (differing) ethical issues that were raised across these case studies and show that potential solutions often lead to new issues and complications. Many of these issues and dilemmas are never shared in scientific outputs, despite being critical to them.

Relevance to sub-theme area/field-building dimension: Doing HPSR requires engagement with ethics guidance and with the moral dilemmas thrown up over the course of conducting studies in the context of significant and complex of global inequity and often significant layers of vulnerability among many of our research participants. We will reflect on the importance of carefully considering context embedded and gendered social relations, and researcher ‘positionality’ in research planning and conduct, and share policy, practice and research implications.

Target audience: health systems researchers and reviewers.
El gasto de bolsillo en salud y la protección financiera efectiva de los seguros en Perú

Co-authors: Vilma Aurora Montañez Ginocchio-Universidad del Pacífico; Ana Lorena Prieto Toledo-Universidad del Pacífico

Resumen:
Motivación: La cobertura universal plantea el reto de escalar en tres dimensiones, en la población a cubrir, los servicios que requerirá esa población para su atención y el gasto a garantizar. El punto de partida y la ruta a seguir depende de cada país y del compromiso que asuma para lograr la cobertura universal en salud. El compromiso exige más recursos para eliminar las barreras para el acceso a la atención, reducir los riesgos financieros de enfermar y un uso eficiente de los recursos disponibles. Perú optó por la política de aseguramiento para el logro de la cobertura universal incrementando notablemente la cobertura. Sin embargo, la protección efectiva no se ha logrado, el gasto de bolsillo sigue siendo alto, en especial con la automedicación y uso de remedios caseros.

Objetivo: Analizar los efectos de las decisiones de política para el logro de la cobertura universal en el Perú medido con la evolución del gasto de bolsillo en salud en los diferentes grupos poblacionales según estatus social y tipo de aseguramiento.


Resultados: Se estima que el gasto de bolsillo de salud se reduce, pero con profundización de las inequidades. El gasto de bolsillo en salud de los hogares asegurados a la seguridad social y otros seguros disminuye en ambos periodos, sin embargo, para el caso de los hogares asegurados al SIS este gasto se incrementa significativamente en el primer período de análisis y en el segundo continua en aumento de manera moderada. Las limitaciones en el acceso a servicios de salud de los hogares SIS los lleva a la búsqueda de soluciones y el gasto en medicamentos (automedicación) es el más importante. Estos resultados plantean la necesidad de priorizar las políticas que fortalezcan y garanticen el aseguramiento efectivo versus la ampliación de coberturas sin garantías.
Clement Moonga, Centre for Infectious Disease Research in Zambia
Abstract Id: 1028

The health system accountability impact of prison health committees in Zambia

Co-authors: Clement N. Moonga-Centre for Infectious Disease Research in Zambia; Anjali Sharma-Centre for Infectious Disease Research in Zambia; George Magwende-Zambia Corrections Service; Chisela Chileshe-Zambia Corrections Service; German Henostroza-University of Alabama at Birmingham; Stephanie M Topp-James Cook University

Introduction: From 2013, the Zambian Corrections Service (ZCS) worked with partners to strengthen prison health systems and services. Early formative work led to the establishment of facility-based Prison Health Committees (PrHCs) comprising of both inmates and officers. We present findings from a nested evaluation of the impact of eight PrHCs eighteen months after program initiation.

Methods: In-depth-interviews were conducted with 11 Ministry and Corrections officials and 6 facility managers. Twelve focus group discussions were convened separately with PrHC members and inmate non-members in 8 facilities. Memos were generated from participant observation in workshops and meetings preceding and after implementation. We sought evidence of PrHC impact, refined with reference to Joshi’s three domains of impact for social accountability interventions – state (represented by facility-based prison officials), society (represented here by inmates), and state-society relations (represented by inmate-prison official relations). Further analysis considered how project outcomes influenced structural dimensions of power, ability and justice relating to accountability.

Findings: Data point to a compelling series of short- and mid-term outcomes, with positive impact on access to, and provision of, health services across most facilities. Inmates (members and non-members) reported being empowered via a combination of improved health literacy and committee members’ newly-given authority to seek official redress for complaints and concerns. Inmates and officers described committees as improving inmate-officer relations by providing a forum for information exchange and shared decision making. Contributing factors included more consistent inmate-officer communications through committee meetings, which in turn enhanced trust and co-production of solutions to health problems. Nonetheless, long-term sustainability of accountability impacts were undermined by permanently skewed power relations, high rates of inmate (and thus committee member) turnover, variable commitment from some officers in-charge, and the anticipated need for more oversight and resources to maintain members’ skills and morale.

Conclusion: Our study shows that PrHCs do have potential to facilitate improved social accountability in both State and societal domains and at their intersection, for an extremely vulnerable population. However, sustained and meaningful change will depend on a longer-term strategy that integrates structural reform and is delivered through meaningful and cross-sectoral partnership.
Engaging Policy Makers and Researchers in Rapid Review Response System to Uptake Research Evidence: An Experience of Ethiopian Federal Ministry of Health and Jimma University

Co-authors: Sudhakar Narayan Morankar-Jimma University

Purpose: Currently there is no culture of research evidence use in policymaking and guidelines preparations in Ethiopian Federal Ministry of Health (FMOH). Alliance for Health Policy and System Research (AHPSR)/WHO, Geneva funded to establish rapid review response system engaging policy/decision makers to use evidence research in policy and program guidelines preparations.

Content and Relevance: We established National Advisory Committee (NAC) to establish Rapid Review Response System (RRRS) between FMOH and Research Institutions engaged in knowledge translation (see diagram) consisting of various stakeholders. Committee is chaired by head of the state health minister’s office. NAC approved structured (as in diagram). Policy Analysis Case Team (PACT) is established in planning directorate of FMOH. All 16 directorates of FMOH will generate their research questions/topics/queries and send to PACT. PACT will prioritize the questions and commission to evidence based health research universities or research institutes with time frame to get the response (demand generation system). The research institute will prepare the review report and submit to the PACT (supply system). PACT will organize the dissemination meeting and send the results to particular directorate who sent the question. Policy makers were engaged in research question identification, commissioning it through Policy Analysis Case Team (PACT) in FMOH to Jimma University Rapid Review Response Centre (JURRRC) and JURRRC produced scoping and rapid reviews and disseminated to PACT members and other policy makers in FMOH. Policy makers learned to think precise question formulation, searching databases, extracting relevant literature using exclusion criteria.

Production and utilization of rapid review results: Until now 2 scoping reviews produced and disseminated to policy makers in FMOH and they will be using the results immediately for health professional training at various levels on compassionate, respectfulness and caring patients and incorporate it in their policy guidelines. Currently 6 rapid reviews are under production and another 10 research topics have been sent to JURRRC by FMOH at the time of this abstract submission. This demand and supply system for utilization of research is permanently created linking FMOH and evidence based institutions and will be sustaining. This system can be adopted by other countries.

Target audience: Policy and decision makers, researchers, funders, health advocates
Mothers and family careers of children with Congenital ZIKA Syndrome in Brazil: A map of social facilities and personal connections in their health care seeking

Co-authors: Martha Moreira-FIOCRUZ; Corina Mendes-FIOCRUZ; Marcos Nascimento-FIOCRUZ

This presentation seeks to present findings of a qualitative research carried out in two areas in Brazil on the social and economic impact of the ZIKA virus. This study is a partnership between Fiocruz and Federal University of Pernambuco (Brazil), and London School of Hygiene and Tropical Medicine (UK). We analyzed sixty semi-structured interviews with mothers and other family careers of children with Congenital ZIKA Syndrome (CZS), born between 2015 and 2016. All families were from the metropolitan area of Rio de Janeiro and Recife, and most of them were from low-income communities.

Usually, the dynamics of support networks such as health sector or affective personal networks are built on the identified needs, access and use. Our hypothesis is that the mothers and other family careers construct care pathways that allow us to understand a logic based on needs. They prioritize what they identify as crucial for a "child development project" for their children.

We proposed to present the patterns of development of networks that mothers and other careers use in care seeking for their children using an ecomap. An ecomap is a graphic representation that illustrates the perspective of families and their connections with the social & health facilities in their environment. It also allows identification of the social context based on the family’s organization patterns and their relations with the local environment, showing the balance or imbalance between family needs and resources. It includes the identification of accessed social facilities as well as personal relations that allow us to discuss gender inequality, rearrangements for increasing family income, and search for childcare centers.

In summary, we identified the following patterns of relations: (1) a disarticulation between health facilities aimed at diagnosis, continuous care health and rehabilitation; (2) support seeking from friends and allies to access to the health care network; (3) an overlap of services with the same characteristics, particularly in terms of physiotherapy; and (4) an ongoing learning about the “particular child development stages” for children with SCZ that leads to a development of different approaches for care and stimulation in the home environment.
Fibu Moses, Ministry of Public Health
Abstract Id: 492

Assessing Health Service Delivery in the Lethem Sub-district by Applying the Integrated Health Service Delivery Network Model in the Context of International Health

Co-authors: Fabu Athaliah Moses-Ministry of Public Health; Karen Yaw-Ministry of Public Health

Lethem sub-district has one hospital that is the main referral hospital for the region serving 3 health centres and 51 health posts within Region 9. The hospital provides free services to persons including those from the border community of Bonfim, Brazil. However, health service delivery is fragmented. The objective of this paper is to assess the level of health service delivery in Lethem sub-district and its association with international border health by applying the Integrated Health Service Delivery Networks (IHSDN) tool. This quantitative analysis was done in three parts: desk reviews, questionnaires and IHSDN tool application with key informants and focus groups. The questionnaire is designed to capture individual opinion of current health service delivery and needs. The IHSDN tool is based on the domains and attributes of IHSDNs as defined by PAHO/WHO. Progress toward achieving a rating for each attribute is based on the consensus of the focus group according to the evaluation criteria provided. These criteria are arranged on a scale from 1 to 4.

The IHSDN tool was applied to 32 health and non-health workers from all 5 sub-districts in Region 9 divided into three groups; and the Regional Health Officer and Doctor in Charge of Lethem District Hospital in four digital platforms. All participants (18) from Lethem sub-district were identified to complete the questionnaire; 13 responses (4M, 9F) were collected. 76.9% of the respondents were health workers. Compiled and adjusted responses to IHSDN attributes revealed significant difference between the responses of individuals (42.9%) and the RHO and Doctor in Charge (24.4%).

From the use of the IHSDN model, it can be concluded that the level of development in the Lethem sub-district is in the range of 30.6% to 46.4% this is an indication of poor health service delivery. Our position is that improvements in our health service delivery would position us to equitably benefit from globalization in health whereby the population on both sides of the border can take advantage of the health services offered giving them the option to choose the service that results culturally, economically, or geographically more convenient. In doing so, this is a way of strengthening bilateral relations in health with Brazil.
Barriers faced by the health workers to deliver maternal healthcare services and their perceptions of the factors preventing their clients from receiving the services

Co-authors: Ngatho Samuel Mugo-University of Sydney; Michael J Dibley-University of Sydney; Eliaba Yona Damundu-UNICEF South Sudan; Ashraful Alam-University of Sydney

Abstract

Background: In South Sudan healthcare providers face several challenges and barriers to deliver maternal health services. Limited resources and underdeveloped health infrastructure that was further damaged by the civil war may have further impacted their service delivery and performance. This study explores the challenges confronted by the health care providers to deliver adequate quality health services to mothers.

Methods: We conducted 28 in-depth interviews with health professionals including midwives/nurses, trained traditional birth attendants (TBAs), gynecologists, and pediatricians in three public health facilities in Juba, South Sudan. We purposively selected these health professionals to obtain insights into the service delivery process at these facilities.

Results: The data showed that the limited support from the health system, such as poor management and coordination of staff, lack of medical equipment and supplies and lack of utilities such as electricity and water supply were the major barriers to the provision of health services. In addition, lack of supervision and training opportunity, low salary and absence of other forms of non-financial incentives were the major elements of health workers’ de-motivation and low performance. Furthermore, security instability as a result of political and armed conflicts have further impacted their services delivery.

Conclusions: This study highlighted the need for the government of South Sudan to make additional investment to improve the health system infrastructure, availability of medical supplies, equipment and utilities. The necessity of equal training opportunities for the health workers at different levels were also stressed by our findings. Regular and timely payment of the health staff is found to be essential. Assurance of safety of the health workers, especially on night shifts, appeared to be essential for providing services.
HIV clients are key to sustaining improvement interventions in HIV care. A qualitative study in Buikwe district, Uganda

Co-authors: Martin Muhire-International Health Sciences University; Beatrice Babirye-Kawolo Hospital, Buikwe district; James Mwesigwa-International Health Sciences University

Background.

Quality Improvement (QI) is one strategy to achieve better health. In Uganda, this concept is not well institutionalised and little knowledge exists on its sustainability. Approaches on how to sustain improvement are not clearly documented so they can be scaled up despite various interventions underway in the country. As a student of public health, I embarked on a study seeking to document an approach to help keep HIV infected patients on treatment to stay healthy.

Objectives.

The study objectives were: 1) determine the most common approach employed in sustaining improvement gains, 2) establish the extent to which patients are involved in sustaining improvement gains.

Method.

A cross sectional- qualitative study was conducted to examine improvement approaches based on knowledge and experiences of health providers involved in providing HIV care. Data collected was primary information from health providers using a semi - structured questionnaires. Participation in the study depended on a staff being: 1) a member of the quality improvement team at respective health facilities, 2) a medical doctor, allied health professional, or nurse involved in providing HIV care, 3) an expert patient assigned tasks at the health facility. A purposive sampling method was used to determine a sample of 60 respondents.

Results.

Involving patients in; decision making, helping fellow patients navigate through care, health education was the most common approach to sustainability of quality HIV care - 36 (60%) of the respondents.

Discussion

Involving patients in care by assigning them roles to conduct health education was the most common improvement intervention. Such helps address challenges of limited human resource for health in low resource settings, consistent with findings of other studies that have revealed improved health outcomes, reduced health costs. This calls for an effective partnership between patients and health workers.

Conclusion

This study proves the notion of the need for strengthening patient-centered care systems.
Debbie Muirhead, The Fred Hollows Foundation & The University of Melbourne
Abstract Id: 2783

**Does integration increase access for rural elderly residents? The costs and benefits of primary eye care integration into PHC systems in Cambodia**

Co-authors: Debbie Muirhead-The Fred Hollows Foundation & The University of Melbourne; Jacquiline Ramke-The University of Auckland; Sith Sam Ath-The Fred Hollows Foundation; Seang Peou-The Fred Hollows Foundation

Background: The integration of previously vertically delivered programs into broader health systems, particularly in primary health care, has long been advocated as a means to increase access to services and improve health outcomes. Evidence underpinning such recommendations, however, is both scarce and mixed. Further, existing evidence arises largely from communicable disease and reproductive, maternal and / or child health related studies. Evidence on integration of services for NCD-related needs is almost non-existent, along with any consideration of health system costs and benefits of integration. In pursuit of increased financial protection and access to services under UHC, it is important to have such information, particularly for vulnerable groups. For eye health the rural elderly are such a group, experiencing the greatest burden of eye and vision problems and potentially being left behind. This paper presents results from the Cambodia component of a three country study of primary eye care integration into broader primary health care systems.

Methods: The Fred Hollows Foundation has partnered with the Government of Cambodia to integrate primary eye care into broader PHC systems with primary care in three provinces. In 2018 an evaluation study of the costs and benefits of this integration is being undertaken, comparing results from these provinces with three provinces where eye care remained delivered largely from hospital level. A bottom up economic and financial costing was conducted along with analysis of patient eye care journeys, seeking behaviour, perceived financial barriers and out of pocket costs.

Results: Data presented will include the incremental health system costs per population and per patient covered of providing primary eye care as part of an integrated minimum package of activities at primary care level in the three provinces. Results will also include scaled up costs of such integration to the Cambodia health system more broadly; scope efficiency adjustments and other integration costing specific considerations will be highlighted.

Discussion / conclusions: By estimating costs and benefits this paper addresses a key gap in evidence on approaches to integrate NCD services at primary care level. It illustrates how greater access to vulnerable populations, such as the rural elderly, can be captured and quantified in planning and evaluating the delivery of integrated primary health care packages. Further, the primary eye care integration assessment tool developed for this project may have application in other non-communicable disease programs.
Debbie Muirhead, The Fred Hollows Foundation & University of Melbourne
Abstract Id: 2802

Private with and within public sector provision – managing incentives in high volume procedures under national health schemes: an example of cataract surgery

Co-authors: Debbie Muirhead-The Fred Hollows Foundation & University of Melbourne; Amanda Huang-The Fred Hollows Foundation China; Wang Jing-The Fred Hollows Foundation China; Carmichael Nduri-The Fred Hollows Foundation Kenya; Kennedy Alwenya-The Fred Hollows Foundation Kenya; Mardi Mapa-Suplido-The Fred Hollows Foundation, Philippines

Purpose: Governments and national health systems in many parts of the world are grappling with pressures posed by financing incentives for high volume procedures and mixed public / private provision under national health insurance arrangements. Frustrations caused by rising costs to the health system accompanied by lower than desired reductions in out of pocket payment burden to patients are resulting in both policy action and inertia in ways that may hinder access for the most vulnerable populations that universal health coverage goals aim to protect.

Surgical procedures purchased that are frequently under fee for service payment mechanisms or even under activity or case based financing, offer opportunities for providers to reap high reimbursements from national health schemes increasing coverage, particularly in middle income countries. In these settings there are often mixed public and private provision models and incentives including dual practice, private firm (both for and not for profit) suppliers of key medical commodities and contracting and direct provision by private health providers.

Focus: This paper draws on existing and ongoing work particularly in cataract surgery under four significant national health insurance schemes in middle income countries of China, Philippines and Kenya to explore the health system, particularly financing, incentives that exist for high volume surgery and the policy pressures and decisions resulting from them.

Cataract surgery is a useful tracer to explore the incentives and policy and provision results of them existing in a mixed public and private health care provision system given its potential for high volume, particularly with aging populations, it use of key commodities (intra ocular lenses) procured under a variety of arrangements and inclusion under most national health insurance schemes. Coverage of cataract surgery is also one of the global indicators proposed for monitoring of universal health coverage.

Significance: Recently a number of country governments, particularly in South East Asia have noted increasing costs of cataract surgery, particularly through private providers, to their national health schemes. Policy decisions in the form of regulating numbers of procedures per surgeon per month, without addressing financing incentives in the system, could actually limit access for the vulnerable populations those national health schemes aim to protect. National governments and scheme administrators are demanding evidence informed solutions and policy advice on how to better address both cost control and equity concerns. This paper outlines some considerations needed in offering up such advice.
Ankita Mukherjee, Jawaharlal Nehru University
Abstract Id: 1963

Tracing Systemic Roots to Medical Malpractice in Private Provisioning of Medical Services - The Case of the Diagnostic Imaging Sector in Delhi

Co-authors: Ankita Mukherjee - Jawaharlal Nehru University

The provisioning of healthcare in India is overwhelmingly dominated by the private sector which itself is vast and heterogeneous. One of the issues related to private sector medical practice that has become of increasing concern is unethical practice of medicine, particularly in the private sector. The range of areas where malpractice exits is extremely broad. Some of these include - prescribing medicines in return for incentives from pharmaceutical companies, charging supernormal profits from families of patients, prescribing unnecessary tests and interventions and getting referral fees or ‘cuts’ for referring patients for tests.

This paper will take an in-depth look at the diagnostic imaging sector in Delhi with special focus on private providers who provide high end imaging services like computed tomography scans and magnetic resonance imaging scans. It will draw on both secondary data and primary data from a qualitative study that interviewed twenty five radiologists and other specialist physicians practicing in different kinds of institutions. The data will be used to construct the nature of the diagnostic imaging sector in the context of Delhi and highlight how the system of kickbacks and referral fees have become deeply embedded in private practice. It will discuss how commercial dynamics create a cycle of unsustainable investments in expensive equipment and unsustainable and unethical means to create demand.

This apparent fading of ethical standards among practitioners needs be placed within broader context of how the health system is organised. The paper argues that increasing commercialisation of health services, without adequate safeguards in the form of regulation or minimum standards, absence of systems to assess evidence and come up with acceptable guidelines, commercialisation of medical education and a shrinking role of the public sector have given rise to a burgeoning private sector where commercial interests often overshadow patient interests.

The paper will finally comment on what India can learn from global experience in building health systems that are more accountable.
Who is left behind when health systems provide sub-optimal maternity care?

Co-authors: Susan Munabi-Babigumira-Norwegian Institute of Public Health; Claire Glenton-Norwegian Institute of Public Health

Background

The Universal Health Coverage agenda requires countries to provide health services that are accessible, affordable and offer good quality care. Whereas the coverage of maternity services in low and middle-income countries (LMICs) has greatly improved over the last decade, the quality of maternity care remains poor, and is linked to persistent high maternal mortality rates. Ensuring equitable access to good quality maternity care through well-functioning health systems remains a challenge in these settings. In this paper, we map the determinants of quality of maternity care available at health facilities in LMIC, and investigate social exclusion through mothers’ experiences of these determinants when accessing maternity care in Uganda.

Methods

We systematically searched for and synthesized 31 qualitative studies conducted in Africa, Asia, and Latin America that explored the views, experiences, and behaviours of facility-based skilled birth attendants providing intrapartum and postpartum maternity care. We conducted focus group discussions to explore mothers’ experiences of these factors when attending maternity care at lower level health facilities in selected districts of Uganda.

Results

A wide range of factors operating both at the health system level and at the individual health worker level can influence the quality of maternity care. Health workers described a lack of training, supervision and human resources. Lack of commodities also influenced quality of care and increased out-of-pocket costs for mothers and their families. When mothers were asked to bring their own commodities or for money to purchase commodities, this created mistrust, excluded some mothers from using maternity services and sometimes led to deliveries at home with unskilled providers. Poor attitudes and unethical behaviour among health workers also resulted in poor experiences of maternity care. Some mothers described harsh communication as well as discrimination of the young, unmarried, or of women who health workers perceive to be poor. This left them feeling uncared for and sometimes influenced their decision to return to the clinic or have a facility delivery.

Conclusion

Our findings suggest that poorly resourced public health systems with unsupervised, overworked health workers can influence the quality of care available. When vulnerable mothers have negative experiences and perceptions of the quality of care at health facilities, this can create mistrust and exclude mothers from utilising health services and worsen inequities. Evidence on context-specific barriers can be useful for programme managers and other stakeholders when designing quality improvement strategies for health services that ensure no one is left behind.
IMPACT OF LEADERSHIP TRAINING AND MENTORSHIP OF FRONTLINE HEALTH WORKERS ON QUALITY OF HEALTH SERVICE DELIVERY. A PRE-POST CONTROLLED STUDY

INTRODUCTION

Motivation and cohesiveness among health workers in resource-limited settings is still a challenge. Baylor-Uganda set up a leadership-mentorship program designed to improve the quality of health service delivery. Despite numerous efforts to improve motivation and teamwork, little is known about the effectiveness of leadership interventions in improving the quality of health service delivery. The purpose of this study was to measure the impact of Caring Together leadership interventions on the leadership styles of facility in-charges, motivation, and teamwork of health workers and patient satisfaction.

Methodology

Using a quasi-experimental longitudinal study design over a 24-month period, we randomly selected 180 health facilities in the Eastern and Rwenzori region that had participated in Caring Together leadership initiative as the intervention and 90 health facilities in the West Nile region where the program wasn’t implemented as the control. We collected data on health workers’ perceptions of their in-charge’s leadership styles, their levels of motivation and teamwork, and patients’ perception of quality of care they received during the intervention period. For each variable, we used paired t-tests to measure the effect of the intervention and difference-in-difference regression method to attribute this effect to the leadership intervention.

Results

Because of the intervention, health workers reported a 12% increase improvement in transformational leadership exhibited by their supervisors (DiD=0.41, 95% CI:0.27-0.56). For teamwork, health workers reported a 16.1% improvement in participative decision making (DiD=0.45, CI:0.29-0.61) among health workers in intervention groups compared to their counterparts in the control region. Patients in intervention groups reported a 7.5% improvement in levels of empathy (DiD=0.28, 95% CI:0.10-0.47) and 34.5% improvement in involvement (DiD=1.0, 95% CI:0.78-1.25) with their interactions with health workers. There was no evidence of improvement in the motivation.

Conclusion

The leadership program has managed to transform the leadership styles of facility in-charges as well as encourage teamwork among health workers through participative decision making.
Lucy Mwangi, University of Nairobi  
Abstract Id: 858

**Use of Anti-Inflammatory Drugs for HIV Prevention: Role of Community Engagement in New Approaches to Infection Prevention**

Co-authors: Lucy Wangari Mwangi-University of Nairobi; Julie Lajoie-University of Manitoba; Juliana Cheruiyot-Kenya AIDS Control Project; Maureen Akolo-Kenya AIDS Control Project; John Mungai-Kenya AIDS Control Project; Kimani Makobu-Kenya AIDS Control Project; Julius Oyugi-University of Nairobi; Joshua Kimani-Kenya AIDS Control Project; Partners for Health and Development in Africa; Keith R. Fowke-University of Manitoba

**Introduction**

Health intervention methods are most effective where there is significant community engagement and involvement. Clinical science research can have an important impact on target populations, therefore, discussion with community members prior to a study can increase adherence to the study protocol for better outcomes. Such strategies are particularly pertinent in health interventions for stigmatising diseases such as HIV/AIDS and cancer. Community engagement is shown to stimulate dialogue, activate interest and participation, and help introduce evidence-based knowledge to potential participants and community members at large.

**Methods**

Our study aimed to explore the effects of two anti-inflammatory drugs on T-cell immune activation to see if immune quiescence can be induced among HIV-negative women in Nairobi, Kenya. During planning, a meeting (baraza) was organized between the community from which potential study participants came and the study team including the investigators, clinicians, community mobilisers and peer educators. Aspects around the study design, drugs to be used, potential side effects, study duration, samples to be collected, sampling methods and expectations of both study team and participants were addressed. An interventional, randomized, double arm study was then carried out over 3 months.

**Observations**

The consultative meeting addressed queries among the community members. This helped to strengthen the methodology especially with regard to scheduling of clinic visits and requirements to ensure keeping with the study protocol. There was also discussion of matters around HIV/AIDS and other sexually transmitted diseases. The women, and their partners, supported the drugs chosen viewing them as ‘common’ with no stigma. During the study, participants indicated that felt comfortable taking the drugs to their home. Participants also felt comfortable answering intimate questions for instance of their sexual history. Self-reported daily intake of the drugs was at about 64%. However, drug levels measured after 6 weeks drug intake showed 94% and 80% detection in blood plasma and cervico-vaginal lavage (CVL) samples respectively among women in ASA arm; and 91% and 52% detection in plasma and CVL respectively among women in HCQ arm, out of 71 samples in each arm.

**Conclusion**

The importance of community engagement during clinical research is underlined; and involving community members in designing clinical research is feasible. Continued follow-up with participants helped with adherence to study protocol. This also helped emphasise and provide knowledge about HIV/AIDS to participants and the community.
Tapas Nair, Immunization Technical Support Unit
Abstract Id: 2214

**Mission Indradhanush – an initiative to improve immunization coverage in India by reaching the unreached**

Co-authors: Tapas Sadasivan Nair-Immunization Technical Support Unit; Sachin Rewaria-Immunization Technical Support Unit; Pritu Dhalaria-Immunization Technical Support Unit; Pradeep Haldar-Ministry of Health & Family Welfare, Government of India

**Background:**
India’s Universal Immunization Programme (UIP) is probably the largest of its kind in the world, in terms of quantity of vaccine used, number of beneficiaries catered to (children and pregnant women), number of immunization sessions organized and the geographical spread and diversity of areas covered. It caters to nearly 27 million infants and 30 million pregnant women annually free of cost. However, India was only able to achieve a full immunization coverage of 65% by the year 2014. It was realized that certain sections of society were unable to get access to services in the public health system. This necessitated the evolution of a new approach to provide immunization services.

**Methods:**
The Government of India (GoI) launched Mission Indradhanush (MI) in December 2014 in order to accelerate the rise in full immunization coverage in the country. Based on the estimated number of unvaccinated and partially vaccinated children, high priority districts were selected before each MI phase for the rollout of the program. Robust microplanning was conducted to identify pockets of missed children, with focus on underserved and hard-to-reach areas, urban slums with migratory populations, as well as nomadic and tribal communities. Gap analysis was conducted to find bottlenecks in the health system, and need-based action plans were created.

**Results:**
Over 4 phases of Mission Indradhanush, nearly 3.5 million outreach sessions have been conducted, immunizing more than 6.8 million pregnant women and 25.4 million children. Almost 3 million children were immunized for the first time in life, while 3.7 million pregnant women and 6.7 million children were fully immunized. As per the Integrated Child Health and Immunization Survey (INCHIS), there was an estimated 6.7% rise in immunization coverage in the country following the first MI phase.

**Conclusion:**
Successful implementation of the Mission Indradhanush initiative will help India attain its target of 90% full immunization coverage by the year 2020, but health system strengthening will be necessary to sustain the gains achieved through MI. This will require substantial investments in public health – incorporating all the unreached populations in the annual routine immunization microplans, eliminating the shortage of manpower, improving vaccine safety and spreading awareness about the benefits of vaccines to generate demand for immunization services in the community.
Beyond the PDSA: the use of QI as part of an integrated package to address quality of care for preterm babies in Uganda and Kenya

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Background

Prematurity is the leading cause of death for children under five years globally. As with other complex clinical conditions, there is no single intervention that if universally applied, will save these babies. Further, those interventions that are known to help suffer from poor and inconsistent uptake. Thus, we developed a mutually reinforcing package of interventions designed to increase use of evidence-based practices and improve overall quality of intrapartum and immediate newborn care in selected health facilities in rural Kenya and Uganda. These include a data-strengthening intervention, a modified version of the Safe Childbirth Checklist (mSCC), simulation-based provider training and mentoring, and a Quality Improvement (QI) Collaborative.

Methods

We formed a QI Collaborative with an objective of reducing preterm mortality within 18 months and chose indicators that are reflected in the evidence-based practices in our mSCC and reinforced in provider training. QI teams were established in January 2017. We report interim results on 4 indicators (gestational age [GA] estimation, Kangaroo Mother Care [KMC] uptake among eligible babies, Antenatal Corticosteroids [ACS] use for eligible women, and mSCC use) achieved by teams through January 2018. Other data sources including pre- and post-test results to measure provider knowledge about evidence-based practices, and recorded simulations showing use of such practices.

Results

QI team run charts reveal consistent improvements in all indicators across both countries. For example, ACS use in Uganda increased from 15% to over 80% of eligible mothers, and mSCC use climbed from an initial 42% to nearly 90%. Process and system change ideas tested and found to be effective include: bedside handover of patients with signatures between nursing shifts, triaging, designated space for KMC and high-risk mothers, peer support and regular supervision. Participants in QI Learning Sessions also cite mentoring visits and use of the mSCC as contributors to improved performance. Data from provider training show knowledge scores improved from 54% to 69%. Simulation data confirms improved practices: ACS use in simulation climbed from 61% to 94% which paralleled QI results; reliable assessment of temperature from 49% to 69% and fetal heart rate from 73% to 95%; and administration of antibiotics from 36% to 92% and magnesium sulfate from 40% to 67%.

Discussion

QI Collaboratives are a powerful tool in improving quality of care at birth including for preterm babies. Combining them with other mutually-reinforcing interventions focused on a common objective can potentiate their effect, which may ultimately improve clinical outcomes.
Denise Namburete, NWeti
Abstract Id: 2572

**Holding a Health System to Account: Voices from Mozambique**

Co-authors: Denise Namburete -NWeti; Erica Marie Nelson -Institute of Development Studies

In this documentary we hear directly from health service users and providers in the Mozambican capital city of Maputo on accountability gaps and challenges. Filmed as part of the Vozes Desiguais/Unequal Voices ESRC/DFID-funded research project on the politics of accountability within multi-level health systems in Brazil and Mozambique, these interviews capture the frustration and injustice of health inequities as they are experienced in day-to-day life. Common problems such as unacceptably long waiting times, frequent drug stock-outs and illicit charges for public health service delivery are described by residents of Maputo. The film explores what strategies are possible to ensure that these issues are comprehensively dealt with by those with the power to remedy them. In a country such as Mozambique, with a post-independence history of national health system creation and the a promise made to achieve 'health for all', what would health management strategies and an enabling policy environment need to look like to have more meaningful accountability on health user rights and entitlements?

NOTE: the multimedia link provided below is to previous award-winning videos produced by NWeti. The documentary described in this abstract is currently under production and will be released as part of special issue of the IDS Bulletin on Accountability for Health Equity: Galvanising a Movement for Universal Health Coverage; in April 2018. It will be 7-8 minutes in length. It will be in Portuguese with subtitles in English. The target audience for the film is health systems decision-makers interested in understanding accountability gaps at the level of primary health care services in post-conflict settings and innovative engagement strategies to address these gaps.
Invisible providers: Home-care of persons affected by stroke in the geriatric age group

Co-authors: Nakkeeran Nanjappan-Ambedkar University Delhi; Smita Parmar Solanki-Indian Institute of Public Health Gandhinagar; Ruchi Patel-Indian Institute of Public Health Gandhinagar; Partha Sarthi Ganguly-Indian Institute of Public Health Gandhinagar; Vaishali Sodagar-Department of Health and Family Welfare, Gujarat (UNICEF Gandhinagar supported); Minal Doshi-Indian Institute of Public Health Gandhinagar

Background

Increasing incidence of stroke coupled with poor access to quality medical care renders a sizeable population, especially in the geriatric age-group, disabled for rest of their life. In such cases, the responsibility of taking care of these individuals often falls squarely on the immediate family. Cost equivalent of this component of care is enormous, yet remains largely invisible and unsupported.

Methods

A cross-sectional study was done among individuals in the geriatric age-group who had a stroke at least two years prior to the survey. Data was collected in Gandhinagar district, Gujarat, India. It entailed a survey of 113 individuals, with a structured set of tools including Barthel Index (BI), and in-depth interviews of a sub-sample of 30 individuals.

Results

Average period since stroke and therefore average length of care was 7.5 years. Only 9% of participants had fully recovered; rest continued to have mild to very severe disability. More than three-fourth of them had at least partial loss of functionality in at least one of their limbs. About 23%, 25% and 12% of respondents coped with, partially or fully affected vision, speech and hearing respectively. Many required other’s support for walking (30%), passing motion (35%), urination (38%), repositioning from different postures (8-24%), feeding (22%), bathing (39%) and grooming (51.3%). Further, many reported regular or occasional accidents of incontinence while passing of bowels (31%) or urination (27%).

Households made minimum alterations/innovations in built-environment and furniture, which barely included low-cost improvised toilet seats, plain walking sticks, rope or metal support on walls. Even access to different rooms in the houses was often not disable-friendly in fact many did not have toilets. A few used un-motorised tricycles.

State and health system’s support for treatment and rehabilitation was limited.

Bulk of the care came from the immediate family members and in the case of most male participants care primarily came from their spouses.

Discussion

The study highlighted that it is the family – primarily female members – who provided care, over the prolonged periods of recovery and rehabilitation after stroke. While there is a need to expand the role of the formal health system there is also a need to acknowledge and leverage the role played by these invisible set of providers and enhance their role by complementing it with a liberal supply of basic assistive devices, physiotherapy support and customisation of built-environment.
Brienna Naughton, Strategic Research, Analysis, and Training Center; University of Washington
Abstract Id: 3984

**Vision to policy: the development of use cases for molecular epidemiology for malaria elimination**

Co-authors: Brienna Naughton - Strategic Research, Analysis, and Training Center; University of Washington; Ronit Dalmat - Strategic Research, Analysis, and Training Center; University of Washington

**Purpose:**
Impressive advancements have been made to combat malaria globally, with dramatic declines in incidence and mortality. However, to achieve the Sustainable Development Goals’ health targets and eliminate malaria by 2030, these efforts need to be accelerated in a coordinated manner utilizing the latest innovative technologies and methods.

**Focus:**
Genetic tools have enabled significant advancements in understanding malaria population genetics and transmission, but have only had limited integration into global public health practice. As such, there is a lack of clarity for how these tools fit within the broader malaria elimination vision and goals, and how they can be deployed as actionable policy at the National Malaria Control Program level. Based on extensive research and engagement of program experts, researchers, and funding stakeholders, we propose a series of use cases for how molecular and genetic information can be informative to malaria elimination efforts, in line with the WHO elimination framework.

Use cases are the specific application of genetic technologies to global malaria elimination and provide a key framework for incorporating multiple levels of stakeholder engagement. Business, software, and technology fields have employed use case analysis to provide functional descriptions of systems, and a framework for the application of new methods and tools to known problems. Many genetic research projects have focused on deploying novel research tools in global health, but a clear analysis is needed to determine whether the new tools are providing essential and effective information.

**Significance for the sub-theme: innovative practice in health systems development**

The development of use cases for molecular epidemiology for malaria elimination is an innovative practice in health systems development, and provides an opportunity for research and public health program communities to work together. This alignment allows for these groups to have important discussions about how to ensure genomic data are local, interpretable, and actionable resources for the malaria community, with community-driven best practice methodologies for the generation and analysis of data.

**Target audience:**

By linking the vision of a world without malaria to informed use cases for molecular epidemiology for malaria elimination, the research and development of genetic tools can be focused to support the needs of malaria control and elimination programs of malaria, ultimately leading to the establishment of normative policy for the use of these methods. The uses of genetic analysis and molecular epidemiology for malaria elimination provide great promise to accelerate the path to elimination.
C-section deliveries in private hospitals: too much to pay with too difficult coping strategies for the poor families in Bangladesh Health System

Farina Naz, icddr,b

Abstract Id: 2170

Background

C-section is a surgical procedure and one of the components of comprehensive emergency obstetric and newborn care. Poorer families from low income countries most often face catastrophic health expenditures to meet up the costs related to this emergency surgical intervention. However, data regarding expenditures related to C-section deliveries and coping strategies for financial burdens differentiated by socio economic classes are minimum in developing country context where out-of-pocket remains major mode of payment.

Methods

This cross sectional study was conducted in a tertiary level private hospital in rural Bangladesh. Women who delivered by C-section between October 2016 to December 2016 (n=425), have given written informed consent were the study participants. A comparative analysis was done to document both the direct and opportunistic costs incurred through C-section deliveries along with financial coping strategies adopted by the study and comparison groups of women. The study group comprised of women coming from poor and lower middle wealth quintile families and comparison group belongs to middle, upper middle and richer wealth quintile background.

Results

The mean age of study participants was 25 years. The facility delivery rate was low among study group than comparison group (74% vs. 77%; p<0.001). Monthly family income and expenditure were significantly lower among study group than the comparison group counterparts (p<0.001) though direct medical cost was identical for respondents from both the groups. However, direct non-medical cost and indirect cost, both were lower in study group than comparison group (p<0.001). About 77% families had saved money for bearing C-section cost. Such savings were less frequent for the participants from the study group than comparison group (59% vs. 70%; p<0.001). Over one third (39%) of the women from study group borrowed money from others as opposed to 25% of the participants from comparison group who received supports from relatives or friends to clear outstanding hospital bills (p<0.001). 57% of the study group families as opposed to 27% comparison group families borrowed money from others (p<0.001).

Conclusion

Our study conferred that poorer families had fewer savings and need to borrow money from families and friends to bear C-section service cost which is an ultimate threat for Universal Health Coverage. Innovative financing strategies are needed to ensure health equity.
Tracking catastrophic healthcare expenditures for the States of India

Co-authors: Jyotsna Negi-National Health Systems Resource Centre; Kadarpeta Rahul Sankrutayyan Reddy-National Health Systems Resource Centre; Tushar Mokashi-National Health Systems Resource Centre

In India, healthcare is mainly financed through household Out Of Pocket Expenditures (OOPE). More than two-third of the health expenditure is financed through OOPE, resulting in increased financial burden on households. In the year 2011, about 210 million people incurred catastrophic health expenditures (CHE) and about 50 million people were impoverished due to high OOPE on health.

To address the burden of CHE and the impoverishment caused thereto, the National Health Policy (NHP) 2017 for India aims at achieving a significant reduction in OOPE and proportion of households experiencing CHE and impoverishment. It envisages to raise Government health spending to 2.5% GDP by 2025 from 1.13% of GDP in 2014-15 and to increase State sector health spending by 8% of their budget by 2020.

India is a union of 36 States and Union Territories with diverse, inter alia, socio-economic conditions and health financing indicators. As Health is a state subject, it is important that States take measures to reach towards the common goal of achieving UHC and meeting the international SDG targets along with the national targets. But currently there is no baseline information available with the states to set their own targets.

In this paper we’ve attempted to measure state wise estimates for catastrophic OOPE by households from rural and urban areas and according to their living standards using the national consumption expenditure survey data. The methodology adopted uses proposed SDG thresholds of 10% and 25% of total consumption expenditure. This measure is the official indicator of UHC financial protection among the SDGs (Indicator 3.8.2).

The results show substantial variations across states where the burden of CHE (at the 10% threshold) on households incurring OOPE on health ranges from 0.4% in Nagaland to 31% in Kerala. In-depth analysis shows further variations in rural/urban areas and across income quintiles.

These estimates will serve as baseline for the states and help them in monitoring the extent of Catastrophic spending on Health. The State Governments can also keep a track of their performance, prioritize health and implement programs that are customized to their state-specific needs thereby leading to improved financial protection and the health outcomes. This baseline can also help in measuring the impact of the newly launched National Health Protection Scheme (NHPS) which intends to provide secondary and tertiary-care hospitalization services to 100 million households (approximately 500 million individuals).
Understanding the barriers to women accessing eye health services in Nepal: a gender analysis

Co-authors: Anil Neupane-The Fred Hollows Foundation Nepal

Background: Despite progress in the development of eye care services in Nepal, women’s access to and utilisation of eye care services is disproportionately low. Rates of service utilisation for women are about the same as men, despite higher rates of visual impairment and blindness amongst women. Very few studies exploring issues relating to avoidable blindness and gender have been carried out in Nepal. This study sought to better understand the experiences of women requiring eye care including the barriers and challenges to access.

Methods: This was a descriptive cross-sectional study using both quantitative and qualitative methods. A community Knowledge, Attitudes & Practices (KAP) survey and a cataract patient KAP was carried out. Key informant interviews and focus group discussions were also held with these groups. The study included a policy analysis of relevant national policies and synthesis of existing data relating to this study. Results: Only 24.9% of households in the study were headed by females, and females were less likely to be engaged in paid employment, impacting health care decision making power. Women were significantly more likely to report difficulty in accessing eye health services than men (39.4% vs. 34.2%, p&lt;0.05) and also significantly less likely to wear glasses if needed than men (50.3% vs. 66.3%, p&lt;0.05). Some of the barriers in accessibility of eye services were similar for women and men, including transportation and cost. However, women faced additional barriers including prioritising their family’s needs over their own for health, personal financial circumstances, being unable to travel alone, and lack of family support and information about eye care services. These barriers caused a delay in eye health seeking behaviour, including a delay in receiving cataract surgery. Of those who sought eye health services, women more commonly visit a general health services (health post or hospital) whilst men most commonly visit a specialist eye clinic or hospital. Males were more likely to receive subsidised services than women. Conclusion: Women are more likely to report barriers to accessing eye health services, and were less likely to wear glasses, despite being more likely to experience visual impairment. Uptake of cataract surgery is low, and varies by gender according to health facility. Strategies to address transportation and cost are needed for both women and men, with additional strategies needed to address the barriers experienced by women. Advocacy efforts are needed to ensure gender considerations are included in policy and practice.
Giang Nguyen, Health Strategy and Policy Institute
Abstract Id: 2189

**Determinants of health care seeking behavior of people with non-communicable diseases in Vietnam: a mixed-methods study**

Co-authors: Giang Hoang Nguyen-Health Strategy and Policy Institute; Rohan Jayasuriya-University of New South Wales; Oanh Thi Mai Tran-Health Strategy and Policy Institute; Hien Thi Ho-Hanoi University of Public Health

**Introduction:** Non-communicable diseases (NCD) have become the leading cause of morbidity and mortality in Vietnam. This study aimed to explore determinants of health care seeking behaviour (HCSB) using the Andersen model of health care utilization among people with NCD in Vietnam.

**Methods:** A sequential explanatory mixed method design was used where the first study analyzed data from a cross-sectional household survey of a sample of 2,038 individuals with NCD aged 18 years and older from three provinces representing urban, rural and mountainous areas of the country. HCSB was categorized into three types of care: no care, informal care, and formal care. Multinomial logistic regression analysis was carried out to with selected factors based on Andersen’s model of health care utilization. In-depth interviews were used to gather qualitative data from a subset of participants from one district. Thematic analysis was carried out.

**Results:** Age, the perceived severity of illness and the province of residence were associated with the decision to obtain formal care, as against informal care and no care. The severity of illness was the strongest predictor of HCSB of people with NCD (OR in the range 1.8 to 8.2). This study did not find a significant relationship between the possession of Health Insurance (HI) and the decision to seek care. Nevertheless, among people who sought care, the insured were approximately three times more likely to seek formal care at health facilities rather than obtaining informal care (self-medication or home treatment) than the uninsured.

The qualitative study findings highlighted a number of barriers at the primary care setting, including unproductive patient-provider interaction, complicated and inflexible service delivery, long waiting times, limited and interrupted provision of medicines, and financial difficulties due to health insurance co-payments.

**Conclusions:** The study found a relationship between ownership of HI and utilization of formal care. However, individuals with NCD face barriers to access health services and regular treatment for NCD. These findings indicate that there are barriers that persons with NCD face and the need for policy interventions to improve access to long-term care among people with NCD in Vietnam.
Evaluating the quality and feasibility of coding patient morbidity data in routine health information systems to support the National Health Insurance in South Africa. (MbHIS-QUAL)

Co-authors: Edward Nicol-Burden of Disease Research Unit, South African Medical Research Council; and Stellenbosch University, South Africa; Lyn Hanmer-Burden of Disease Research Unit, South African Medical Research Council; Debbie Bradshaw-Burden of Disease Research Unit, South African Medical Research Council

Background

Given South Africa’s plans to implement a National Health Insurance (NHI) that will provide all citizens access to essential healthcare services and ensure Universal Health Coverage, the need for a reliable, standardised patient-level data platform that can support Diagnosis-related Groupers (DRGs) for reimbursement purposes and resource allocation/management has become urgent. The South African National Health Act requires that a written discharge summary (DS) be provided to all in-patients at the time of discharge. Despite the importance of DSs as a source of morbidity data, no study in resource-limited settings, including South Africa has examined the availability of standard DS, and assessed completeness of, and agreement between DS and patient medical records in public hospitals.

This study evaluated the availability and quality of coded-clinical data on health problems and interventions, and the feasibility of clinicians to code patients’ data in routine health information systems (RHISs) in public hospitals to support both planning and implementation of the NHI, and morbidity surveillance.

Methods

We undertook a cross-sectional, observational-analytic study, using a sequential explanatory mixed-methods approach, to investigate the availability and quality of coded and codable clinical data in a nationally representative sample of 7 tertiary, 10 regional and 28 district hospitals in all 10 NHI pilot districts in South Africa. Data were extracted from a sample of 5,780 routine patient-level records for 9 pre-defined data elements on diagnoses and procedures, by comparing the source registers with the patient-folders, and the patient-folders with the DSs for patients admitted in March and July 2015. Results from the assessment informed the in-depth interviews with 25 key informants. We computed descriptive statistics, correlation, analysis of variance and content analysis.

Findings/Results

Preliminary analysis show that despite all of the records having correct patient identification, considerable data quality concerns were observed between the registers, patient-folders and DSs. Although 64% of patients have a DS, only 10% of the diagnoses were coded using ICD10 codes. The limited coding were partly attributed to insufficient competencies of clinicians to code and lack of time to do so.

Conclusions/recommendations

The absence of coded patient diagnoses and accurate data implied that the RHISs in public hospitals in NHI pilot districts is insufficient to support reimbursement and resource allocation/management. Hence, hospital management may be inadequately reimbursed for services provided, which could hinder quality service delivery. Institutional capacity to encourage diagnoses coding, improve data quality and ensure all patients have a standard DS is needed.
District health management team and community empowerment for reducing child-survival service delivery bottlenecks in low-income countries: a reference to the CODES project in Uganda

Co-authors: Charles Nkolo-LSTM Uganda; Robert Anguyo DDM Onzima-Liverpool School of Tropical Medicine; Caroline Jeffery-Liverpool School of Tropical Medicine; Joseph Valadez-Liverpool School of Tropical Medicine

Background: In response to the high burden of pneumonia, diarrhoea and malaria, the "Community and district empowerment for scale-up (CODES) project" demonstrated how a management and community empowerment strategy can be taken to scale in low resource setting, Uganda in this instance. The project intended to improve coverage and quality of interventions to reduce deaths from pneumonia, malaria, diarrhoea and immunizable diseases through improved targeting of interventions, helping district health managers use simple empirically-based tools to improve performance of district health teams, and empower communities to demand for and utilize quality healthcare. This presentation outlines the tools used by the district health management team for community empowerment. It presents trend of outputs in 8 CODES project intervention districts and the overall intervention impact over the period 2013-2016.

Methods: The CODES project was a cluster randomized controlled trial implemented in 16 (8 intervention and 8 control) districts. We supported district teams to generate data from community and health facilities using Lot Quality Assurance Sampling (LQAS) methods; employed the Tanahashi model for bottleneck identification; a management checklist for causal and management analysis; and equity-focused prioritization tool for prioritizing the identified interventions; and then generated and implemented child survival actions. Communities were empowered through U-reporting and focused community dialogues guided by findings from LQAS and health facility assessment (HFA). HFA data were used to measure supply-side outcomes while community LQAS-generated data were used to monitor community-level outcomes.

Results: Virtually all the determinants for effective health services in the Tanahashi model displayed an upward trend over the years of intervention for thematic areas of pneumonia, diarrhoea, malaria and immunization. The average score for child survival indices grew from 50% (in 2013) through 53% (in 2014) to 65% in 2015. The intervention resulted in 23.3%, 19.3% and 1.6% improvements in recommended the treatments for malaria, pneumonia and diarrhea, respectively. Consequently, the prevalence of malaria and pneumonia dropped by 10.4% and 16.3% respectively.

Conclusion: Use of various tools for district and community empowerment demonstrated positive outcomes. Adaptation of this approach in similar settings could reduce bottlenecks to delivery of child survival interventions. These tools could be used in a sustainable manner for continued strengthening of the Ugandan health system.
Prevalence and predictors of surgical site infections after cesarean delivery at a district hospital in rural Rwanda

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Background: In rural East Africa, more than half of all surgeries are cesarean sections. Women receive little clinical oversight after discharge, and about 10-15% of women develop a surgical site infection (SSI). A delay or failure to seek care for an SSI can lead to considerable morbidity or death. We aimed to develop and validate a screening algorithm to assist community health workers (CHWs) in identifying SSIs and referring women to care.

Methods: All women, 18+ years old, who underwent cesarean delivery at Kirehe District Hospital (rural eastern Rwanda) between April and October 2017 were eligible for the study. During discharge, women were asked to return to the hospital on post-operative day (POD) 10 (+/- 3) and provided a voucher to cover transportation costs. At the return visit, a CHW administered a nine-item clinical questionnaire, assessing for: 1) increasing pain since discharge, 2) fever since discharge, 3) erythema, 4) edema, 5) induration, 6) dehiscence, 7) discolored drainage, 8) drainage with foul odor, and 9) thick drainage. Independently, a general practitioner (GP) administered the same questionnaire and assessed SSI presence. GP’s SSI diagnosis was used as the gold standard. We split the data into two independent sets – a development (April-July) and a validation (August-October) dataset. Using a simplified CART analysis, we identified a subset of screening questions with maximum sensitivity for the GP and CHW. We evaluated the subset’s sensitivity and specificity in the validation dataset.

Results: Of the 596 women enrolled, 525 (88.1%) returned for the follow-up visit – 294 (56.0%) in the development and 231 (44.0%) in the validation dataset. Two combinations of the GP-administered questions maximized sensitivity: fever/pain/discolored drainage (sensitivity=96.8%, specificity=85.6%) and fever/gaping wound/discolored drainage (sensitivity=96.8%, specificity=86.7%). For the CHW-administered questions, fever/pain/discolored drainage maximized sensitivity (sensitivity=67.1%, specificity=73.8%), and was the subset of screening questions recommended. In the validation dataset, this subset had sensitivity=95.2% and specificity=83.3% for the GP-administered questions and sensitivity=76.2% and specificity=81.4% for the CHW-administered questions.

Discussion/conclusions: We believe that the combination of questions – fever/pain/discolored drainage – has sufficient sensitivity and specificity and is simple enough for CHWs to use for a community-based screening for SSIs post-cesarean delivery. The CHW-administered questions had lower sensitivity, indicating the need for increased clinical training to improve accuracy of responses. This protocol is now being used in a randomized-control trial to evaluate the impact of various CHW-mHealth interventions to support identification and referral of post-cesarean patients with SSIs.
Analysing change through institutional entrepreneurship: A case study of a District-based Clinical Specialist Team in South Africa.

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Background: Institutional entrepreneurs (IE) are actors with social and political skills who are able to lead efforts to respond positively to system challenges and bring about system change. They can help to mitigate uncertainty, harness opportunities, frame issues and mobilise constituencies to infuse new values and practices. District-based Clinical Specialists Teams (DCSTs) were recently introduced in South Africa to implement clinical governance, an important strategy for building health system capacity and advancing access and quality health care for all. We present an interpretive qualitative account of micro-level activities and processes of clinical governance by a DCST to explore whether and how they are functioning as IE at a local service delivery level. We seek to understand how lower-level actors in the health system hierarchy influence and exert change in a system undergoing multiple reforms towards universal health coverage.

Methods: In one health district, between 2013 and 2015, we carried out 59 in-depth interviews with district, sub-district and facility managers, DCST members and external actors. We also ran one focus group discussion with the DCST and analysed key DCST-related policies. Using an IE conceptual lens, we analysed key activities, functions and perceptions of the DCST, drawing out whether and how they contribute to institutional change.

Results: The DCST is located in a constrained context. Yet, by revealing and bridging gaps in the system, the team takes on certain IE characteristics. Individual DCST members are also able to function - more or less - as IE by announcing reforms, articulating the strategic vision and direction of the system, advocating for change, mobilising resources and assessing and mitigating risks.

Discussion: DCST functioning promotes a collective IE effort but not all members of the DCST take on IE functions in the same ways. Some members seem better positioned and motivated to engage more proactively than others to bring change to different levels of the district organisational structure, using strategies such as representing co-DCST members in strategic meetings, establishing platforms to convene potential actors to embrace change and articulating interests to promote change. Yet, such moves to spearhead change may also reveal struggles between members themselves given the power dynamics that drive change.

Conclusion: The DCST innovation provides an opportunity to promote institutional entrepreneurship given the influence of their activities on system change. Yet there are nuances between individual members and the team, and these need better understanding to maximize this contribution to change.
MEGHAN O'CONNELL
Results for Development Institute

Sustain Effective Coverage for HIV, Tuberculosis, and Malaria in the Context of Donor Transition in Kenya

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Background
Anticipating the eventual transition of donor funding for the HIV, TB, and malaria programs, the Government of Kenya is increasingly exploring strategies to sustain the expansion of effective coverage for priority services. In partnership with the Global Fund, Results for Development (R4D) collaborated with government focal points to take stock of Kenya’s financing landscape for health and the three diseases and prioritize opportunities and challenges as government scales up domestic investment.

Methods
We reviewed policies, budgets, operational plans, research studies, and forecasts to situate sustainability for the disease responses within Kenya’s health policy trajectory and macro-economic constraints. We then traced health funds through the public financial management (PFM) and extra-budgetary systems, relying on government and donor data and 31 interviews with health officials at the national and sub-national levels. We adapted a new WHO-R4D process guide to assess alignment between PFM processes and health financing functions. The desk review and interviews revealed barriers and bottlenecks to integrating donor-funded activities into government systems, as well as enabled assessment of programmatic risks to sustaining coverage during the transition. We presented priority challenges for successful transition and options for increasing health sector funding and efficiency to a consultative workshop, feedback from which informed final analysis and recommendations.

Results
We characterized a ‘replacement challenge’ of USD 750 million annually without external funding for HIV, TB, and malaria. Kenya can overcome this by mobilizing more domestic resources and increasing efficiency. Economic growth, greater prioritization of health in government spending, and better budget execution will provide more money for health. However, given prevailing growth forecasts, even accelerated progress toward Kenya’s target to allocate 13% of public spending to health by 2022 would leave a considerable deficit compared to need. Boosting sector and program efficiency will be essential to sustainable financing. Improving planning and implementation processes will help to produce more health for the money, including by correcting information asymmetries and clarifying responsibilities across national and county actors; eliminating delays in procurement and supply chain processes; streamlining and bolstering health information systems; and devising an appropriate regulatory framework for contracting private providers with public funds.

Conclusions
This study produced an analytic baseline and government-led process for early assessment and incorporation of sustainability and transition issues into routine health planning and dialogue among health and finance officials. Findings can also inform ongoing collaboration between the Government of Kenya and development partners.
Ekpenyong Ekanem, USAID-Health, Finance and Governance Project

Abstract Id: 2703

The Effect of a Multi-sectoral Approach on Domestic Resource Mobilization Efforts for Health in Rivers State, West Africa, Nigeria

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Purpose: HIV mitigation is in line with the third goal of the Sustainable Development Goals. Nigeria accounts for 9% of the global HIV infection load with about 3.6 million people living with the virus. With an infection rate of 5.8% (FMOH, 2014) Rivers State ranks 9th in the Federation HIV prevalence. A projected population of 145,000 adults and 7,500 children are living with the virus in the State. HIV programs are donor-driven, with dwindling funding illustrated by donor transitioning of PMTCT and low-volume sites over to the State.

Focus: USAID's Health Finance and Governance (USAID-HFG) project implements the USAID's Sustainable Financing Initiative. The SFI is an initiative aimed at achieving an AIDS-free generation with shared financial responsibility with host governments. To achieve this, USAID-HFG initiated an HIV Domestic Resource Mobilization Technical Working Group (DRM TWG). Three key sustainability approaches were the core of the DRM TWG – utilising a multi-sectoral stakeholder group (Public, Private and Civil Societies), inculcating evidence-based data to inform decision making and using high-level political influencers as champions of the HIV response. Strategically, the DRM TWG is chaired by the Honourable Commissioner for Budget and Economic Planning while the Office of the Secretary to the State Government (SSG) coordinates it. HFG supported the DRM in building local capacity to develop and drive a Resource Mobilization strategy and conducted high-level advocacy to relevant personalities who could influence increased public budgetary allocation and spending on HIV/AIDS implementation.

Significance: One year into the project, the HIV response attracted a 167% increase in Government’s budgetary allocation. Quality and evidence-based memos requesting for release of budgetary allocations are now being forwarded through the correct routes. Unlike the previous year, a budget line was secured for the health-sector HIV response in the State budget. From the private sector, free interview slots and adverts worth N19,000,000 ($52,820) were leveraged. The capacity of the State to take ownership of the DRM efforts has also increased with coordination, moderation and meeting venues now borne by the Rivers Agency for the Control of AIDS under the office of the SSG which is a positive sustainability marker.

Target Audience: DRM efforts for health issues require a paradigm shift from focusing only on health-related stakeholders to an intense multi-sectoral stakeholder approach to attract political commitment, stakeholder interest and support. This multi-sectoral model is one that other donors, implementing partners and health professionals can learn from when designing DRM programs.
Prevention of infectious disease during pregnancy among pastoralists in a humanitarian setting: An exploratory study of ambulatory service delivery models for administering antenatal care

Introduction

Infectious disease during pregnancy remains a public health problem that affects pregnant women and the developing foetus. At pregnancy, pre-acquired infections are either reactivated or escalated due to partial immunity. This increases the risk of pregnancy related complications which could eventually result in maternal and/or neonatal mortality if undetected and treated at early stages [1].

Antenatal care attendance among pregnant pastoralists remains relatively lower than the general population [2]. Compounded to this, lower staff capacity, intermittent stock-outs of essential drugs, weaker primary health systems and poor patient provider relationships in humanitarian settings discourage subsequent ANC attendance after the initial one [3]. Moreover, as pastoralist migrate seasonally in search of pasture for flock, pregnant women are most unlikely to receive the recommended ANC visits [4].

Methods

The study was conducted in four areas of Kapoeta County in the Eastern Equatoria of South Sudan. A stepwise approach of four stages were taken to achieve the set objectives. The first stage involved an ethnographic observation of the mobility patterns and health seeking behaviour of pregnant pastoralists. The second, involved a social network analysis of the patterns of movements, factors that facilitates and limits antenatal care. Based on results of the second stage, various models of ambulatory care were identified in the third stage. The final stage is a qualitative evaluation of all identified service delivery models. Using semi-structured interviews and focus group discussions, the study engaged stakeholders to assess the feasibility and effectiveness of implementing each model within the diverse settings of Kapoeta County.

Results

Ethnography shows that polygamy is widely practiced across all areas and movement of wives are dependent on pasture for cattle. Furthermore, non-attendance of ANC was generally linked to deeply rooted tradition and irregular movements of pastoralists dictated by the community. Three models emerged as possible strategies for implementing ambulatory care. The final qualitative evaluation showed that while all models were potentially effective in encouraging optimal uptake of ANC services, safety of drugs could only be assured when delivered via the mobile clinic.

Conclusion

Mobile clinics have proven to be a cost-effective intervention in several settings. In humanitarian setting where there are apparent weaker health system, mobile clinics are relevant in ensuring that safe and quality ANC services are administered. Especially, among pastoralists who often have irregular movement patterns, mobile clinics ensures ANC care are administered and monitored in a timely manner.
Chijioke Okoli, University of Nigeria, Enugu Campus  
Abstract Id: 506

**Financial feasibility of a new Basic Health Care Provision Fund for Maternal and Child Health Services in Kaduna State, Northwest Nigeria**

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**OBJECTIVES**

To assess the financial feasibility of a new Basic Health Care Provision Fund (BHCPF) to provide universal Maternal and Child Health (MCH) services in Kaduna state, northwest Nigeria.

**METHODS:**

A cross sectional quantitative study design was adopted. The study was conducted in one urban local government area (LGA), Kaduna South and one rural LGA (Kajuru) purposively selected in Kaduna State. In each LGA, two primary health centers (PHCs) offering free maternal and child health services were chosen. In total, four PHCs were covered. A costing template was used to generate costing data from the 4 PHCs, key policy documents were reviewed with data capture template. Cost data included both costs of delivering MCH services and administrative costs. Capital items at the facilities were categorized into building, transport, medical equipment. Facility level costs were scaled up to the state level based on the 255 standard PHC facilities in the state. Data were collected between April and June 2016 from staff of PHC facilities, local government councils, and from the state ministry of health. The study team was made up of health economists, public health specialists and financial analysts.

**RESULT**

The BHCPF (about 1 % of the Consolidate Revenue Fund of the Federation) and counterpart fund from the State was inadequate to provide a thin benefit package of health services for all pregnant women and children under five in the state. Also, various funding scenarios were inadequate to provide MCH services for the target beneficiaries in the state. The only feasible option was the funding of child health services with at least 70% of the BHCPF, in addition to other revenue sources. The funding gap analysis shows that more funds would be required in order to provide MCH services in Kaduna State. Personnel costs constituted the largest cost component, yet many of the facilities had insufficient staff when compared to the minimum standards specified by the National Primary Health Care Development Agency. Additional funds are required in order to provide a thin benefit package of MCH services in the State.

**CONCLUSION**

In recognition of the fact that the BHCPF is insufficient to fund MCH services, there is need therefore, by the state government to explore funding from different sources such as from budget allocations, development partners, health insurance schemes at the national, state and community levels as well as internally generated revenue at state and LGA levels.
**Extending coverage to informal sector populations in Kenya: design preferences and implications for health financing policy**

Co-authors: Vincent R. Okungu-Pharmaccess Foundation

**Background:** Universal health coverage (UHC) is important in terms of improving access to quality health care while protecting households from the risk of catastrophic health spending and impoverishment. However, progress to UHC has been hampered by the measures to increase mandatory prepaid funds especially in low- and middle-income countries where there are large populations in the informal sector. Important considerations in expanding coverage to the informal sector should include an exploration of the type of prepayment system that is acceptable to the informal sector and the features of such a design that would encourage prepayment for health care among this population group. The objective of the study was to document the views of informal sector workers regarding different prepayment mechanisms, and critically analyze key design features of a future health system and the policy implications of financing UHC in Kenya.

**Methodology:** This was part of larger study which involved a mixed-methods approach. The following tools were used to collect data from informal sector workers: focus group discussions [N=16 (rural=7; urban=9)], individual in-depth interviews [N=26 (rural=14; urban=12)] and a questionnaire survey [N=455(rural=129; urban=326)]. Thematic approach was used to analyse qualitative data while Stata v.11 involving mainly descriptive analysis was used in quantitative data. The tools mentioned were used to collect data to meet various objectives of a larger study and what is presented here constitutes a small section of the data generated by these tools.

**Results:** The findings show that informal sector workers in rural and urban areas prefer different prepayment systems for financing UHC. Preference for a non-contributory system of financing UHC was particularly strong in the urban study site (58%). Over 70% in the rural area preferred a contributory mechanism in financing UHC. The main concern for informal sector workers regardless of the overall design of the financing approach to UHC included a poor governance culture especially one that does not punish corruption. Other reasons especially with regard to the contributory financing approach included high premium costs and inability to enforce contributions from informal sector.

**Conclusion:** On average 47% of all study participants, the largest single majority, are in favour of a non-contributory financing mechanism. Strong evidence from existing literature indicates difficulties in implementing social contributions as the primary financing mechanism for UHC in contexts with large informal sector populations. Non-contributory financing should be strongly recommended to policymakers to be the primary financing mechanism and supplemented by social contributions.
Sweetened Beverage Taxes and the ‘Co-benefits’ Framing: Insights from the Philippines

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BACKGROUND

On December 19, 2017 the Sweetened Beverage Tax Law (SB Tax) was signed by the President as part of his administration’s Comprehensive Tax Reform (TRAIN), making the Philippines the second ASEAN country to pass such law. The Philippine government capitalized on a policy window, and the shared benefits of health and financing in order to deliver the legislative victory for the Philippines. Thus adding another landmark legislation in its arsenal, as part of its active pursuit in positioning the country as a pro-health nation.

METHODS

To cull out the key conditions that enabled the Philippines’ SB tax proposal to withstand the contentious policymaking process, standard document analysis was carried out on transcripts from all related public consultations and plenary hearings on the SB Tax conducted by the 17th Congress of the Republic of the Philippines.

RESULTS

The SB Tax was initially lobbied as a standalone bill, touted as a health measure with 50% of the tax revenue earmarked for health. The divergence in framing towards a ‘co-benefits’ approach was observed after the SB Tax was integrated as part of TRAIN. Two main themes emerged after this integration: (1) The ‘co-benefits’ framing anchored the optimal tax design, which maximized revenue gains through reduced opportunities for evasion (e.g., taxing per volume capacity on well-defined product categories), and health gains through reduced consumption (e.g., at least 14% - 27% increase in retail price); and (2) The SB tax being defined exclusively as a health measure or a revenue measure is false dichotomy. Harnessing the convergence and cohesion between the health and revenue rationale actually contributes to a well-designed tax policy that benefits both.

CONCLUSION

The integration of the SB tax as part of the administration’s comprehensive tax reform provided a protective policy space that secured its place in the high-level policy agenda. This allowed the tax proposal to resist organized opposition and attempts to water down the advantageous tax provisions. The Philippine experience demonstrates that health taxes do not have to be exclusively framed either as a health or revenue measure. Harnessing the ‘co-benefits’ of public policies enables the government to maximize the policy space to advance the health of the people, and raise revenue to provide basic infrastructure and social services that contributes to human capital development. Thus ensuring that everyone is truly onboard the train towards inclusive and sustainable growth.
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Abstract Id: 3750

Investigating common types and mitigation strategies for corruption in the health sector of Anglophone West Africa

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Background
Corruption is the misuse of entrusted power for private gain. It is wide-spread in the health sector and has, negative effects on health indicators. There is a paucity of knowledge about its the systemic nature, and the ways in which informal institutions and social networks drive corrupt practice in the West African health systems. To provide knowledge for the planning, designing and implementation of high-impact, feasible anti-corruption strategies in Nigeria, this study analysed evidence on types of corruption, different incentives that drive rule-breaking and the evidence on successful anti-corruption strategies among frontline health care providers and managers.

Methods
A review of literature focused on Anglophone West African countries: Nigeria, Liberia, Gambia, Ghana and Sierra Leone. The search was conducted using key Boolean operators to retrieve relevant studies, using a range of search engines. The review included both published and grey literature.

Findings:
A total of 285 publications were retrieved, but 67 of them met the inclusion criteria for detailed review. Across Anglophone West Africa, five types of corruption in the health sector were commonly identified, by order of frequency: (1) absenteeism and late coming; (2) diversion of patients from public to private sectors; (3) inappropriate prescribing; (4) informal payments/bribery; and (5) theft of drugs and other supplies. Corruption was seen to delay progress towards Universal Health Coverage (UHC) as it favours tertiary over primary healthcare programmes. Corruption is driven through social networks, patients seek out providers that they know socially and frequently providing bribes. Alongside these are economic drivers, unpaid of salaries, and lack of other opportunities to increase salary and seniority. The review did not identify specific interventions that were used to actually control corrupt practices. Most studies appear to draw from personal experiences and existing literature to recommend approaches with prospects of combating corruption. Overall, types of corruption were better described than drivers. More evidence is needed on how social and economic incentives combine and shape rule-breaking.

Conclusion:
The review demonstrated that the problem of corruption is increasingly recognized across West Africa as a problem distorting access to essential care and distorting health systems operation. The five most common types of corruption were similar across the Anglophone West African countries and various strategies for mitigating these are suggested. This highlights the opportunity for regional strategies to address corruption as an important but insufficiently studied obstacle to accelerating progress towards UHC.
Keiko Osaki, Japan International Cooperation Agency, Tokyo
Abstract Id: 1647

Maternal and Child Health Handbook use for maternal and child care: a cluster randomized controlled study in rural Java, Indonesia

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Background
For improving maternal and child health (MCH), home-based records have been used traditionally in a form of a single MCH-related program such as child immunization card. To ensure care continuity across a life course of mother and child, Indonesia introduced the Maternal and Child Health Handbook (MCHHB), an integrated home-based booklet for pregnancy, delivery and postnatal/child health. Effectiveness of the MCHHB was evaluated on care acquisition and home care in rural Java, a low service-coverage area.

Methods
We conducted a health centre-based randomized trial, with a 2-year follow-up. Intervention included (i) MCHHB provision at antenatal care visits; (ii) records and guides by health personnel on and with the MCHHB; and (iii) sensitization of care by volunteers using the MCHHB.

Results and Discussion
The follow-up rate was 70.2% (183, intervention area; 271, control area). Respondents in the intervention area received consecutive MCH services including two doses of tetanus toxoid injections and antenatal care four times or more during pregnancy, professional assistance during child delivery and vitamin A supplements administration to their children, after adjustment for confounding variables and cluster effects (OR = 2.03, 95% CI: 1.19–3.47). In the intervention area, home care (i.e. continued breastfeeding; introducing complementary feeding; proper feeding order; varied food feeding; self-feeding training; and care for cough), perceived support by husbands (i.e. saving money for delivery (OR = 1.82, 95% CI: 1.20–2.76), keeping their baby warm (OR = 1.58, 95% CI: 1.02–2.46), and giving their child developmental stimulation (OR = 1.62, 95% CI: 1.06–2.48)), and lower underweight rates and stunting rates among children were observed.

MCHHB use promoted continuous care acquisition and care at home from pregnancy to early child-rearing stages in rural Java. Pregnant women receive the MCHHB at their antenatal care visit, use it for home reference, and share information with families during pregnancy and child rearing. For healthcare personnel, the handbook is a critical health record, documenting and monitoring the services provided, a point-of-care information resource enhancing clinical decision-making ability, and helping clients understand takeaway messages. This study examined the effect of MCHHB use in rural Java, where service coverage was comparatively low.

Conclusion
The MCHHB is an option for countries that are serious about ensuring a continuum of care for MNCH, as a tool to make programmes and health professionals synchronized and to empower families by letting them be owners of their information and managers of their family health.
Un modelo de atención en salud para la integralidad, inclusión y el fortalecimiento de la protección social en Guatemala

Introducción
Guatemala posee rezagos en salud, en un contexto de pobreza extrema e inequidad socioeconómica y territorial, con importantes brechas en infraestructura, recurso humano, financiamiento e inequidades de género, etnia y un deterioro ambiental visible. Además, un enfoque reduccionista de la salud pública, servicios de salud no integrados y un gasto en salud de los más bajos de la región. Consecuentemente es necesario el desarrollo de abordajes integrales e incluyentes innovadores para contrarrestar la problemática guatemalteca actual.

Propósito
El presente trabajo posee como objetivo dar a conocer un modelo de atención en salud formulado y trabajado desde 1998 en Guatemala de abajo hacia arriba, por medio de consultas a diferentes sectores de la población por parte de una coalición de sociedad civil, mostrando nuevos métodos para abordar la salud-enfermedad, a formuladores de política pública. Este modelo se validó en dos pilotajes durante siete años (2003-2010), y posteriormente se fue extendiendo a otros distritos municipales de salud del Ministerio de Salud Pública y Asistencia Social (MSPAS), hasta lograr llegar a formar parte de la política pública de salud (2016-2017).

Referencial filosófico-conceptual-operativo del modelo de atención
El modelo de atención parte de cuatro ejes que pretenden abordar causas sistémicas de la exclusión social en Guatemala. El primero, derecho a la salud, para el fortalecimiento del gasto público y adscripción poblacional; el segundo, género relacional para la inclusión de hombres en la atención y transformar el sistema social de relaciones inequitativas entre mujeres y hombres, además personas fuera del patrón hetero-normativo. El tercer eje, pertinencia intercultural, permite el conocimiento, comprensión y fortalecimiento de modelos de salud Maya y de auto-atención, identificación de perfiles epidemiológicos socioculturales y la coordinación e intercambio horizontal con sus terapeutas. El cuarto eje, medio ambiente y madre naturaleza permite una visión holística y ecosistémica, tomando conciencia que los principales problemas medioambientales son consecuencia de acciones humanas. El modelo posee acciones a nivel comunitario, familiar e individual, con metodologías definidas en búsqueda de la integralidad e inclusión en complementariedad con modelos ancestrales de salud y un sistema de información propio.

Reflexión final
Este modelo formulado desde la sociedad civil permite por medio de acciones afirmativas atender poblaciones sistémicamente excluidas de los servicios de salud guatemaltecos, fortaleciendo el gasto en salud hacia un sistema de protección social y el desarrollo de capacidades de todos los habitantes de Guatemala.
Paul Ouma, KEMRI-Wellcome Trust Research Programme
Abstract Id: 272

Geographic access to emergency hospital care provided by the public sector in sub-Saharan Africa in 2015

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Background
Timely access to emergency or acute care can significantly reduce mortality and international benchmarks for access to emergency hospital care have been established to guide ambitions for universal health care by 2030. However, there is no complete geo-coded inventory of hospital services in Africa in relation to how populations might access these services. This work therefore aimed to assemble a geocoded inventory of public hospitals in sub-Saharan Africa in relation to how populations might access these services, with an additional focus on women of childbearing age.

Methods
In this work, the first geocoded inventory of public hospitals across 48 countries and islands of sub-Saharan Africa was assembled from 100 different sources. A cost distance algorithm based on the location of 4893 public hospitals, population distributions and road networks at a 100m spatial resolution, was used to compute the proportion of populations and women of childbearing age living within a combined walking and motorized travel time of 2 hours to emergency hospital services.

Findings
It was estimated that in 2015, 286 million (29%) people and 64 million (28%) women of childbearing age are located more than 2 hours from the nearest hospital. Marked differences were observed within and between countries. Only 17 countries had more than 80% of their populations living within a 2-hour travel time of the nearest hospital.

Conclusion
Spatial access to emergency hospital care provided by the public sector in Africa remains poor and varies substantially within and between countries. Innovative targeting of emergency care services is necessary to reduce these inequities. The accessibility results and assembled hospital database should be used to prioritize investments in emergency care service provision to achieve universal health access by 2030.
Systematic Review of the Costs of Interventions to Increase Immunization Coverage

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Achieving and maintaining high vaccination coverage requires investments, but the costs and benefits of interventions to increase coverage remain poorly characterized. We conducted a systematic review of the literature to identify peer-reviewed studies published in English that reported interventions aimed at increasing immunization coverage and the associated costs and effectiveness of the intervention. We found limited information in the literature, with many studies reporting effectiveness estimates, but not providing cost information. Using the available data, we developed cost functions to support future programmatic decisions about investments in interventions to increase immunization coverage. Our cost functions estimate the non-vaccine cost per dose of interventions to increase absolute immunization coverage by one percent, through vaccination campaigns or routine immunization. For campaigns, the cost per dose per percent increase in absolute coverage increased with higher baseline coverage, demonstrating that incremental costs increase to reach increasingly higher coverage levels. We also observed economies of scale, with lower costs per dose for larger population sizes targeted. Future studies should evaluate the performance of the cost functions and add to the database of available evidence.
Efecto del pago por desempeño en atención primaria de la salud sobre la mortalidad infantil: Evidencia de control sintético para Argentina

Contexto: Existe un debate informado en los países desarrollados acerca de los efectos de los mecanismos de pago por desempeño en la mejora de la calidad de los servicios de salud y resultados sanitarios. Tal instrumento de política sanitaria podría ser de gran relevancia en el contexto actual de los países latinoamericanos, que buscan brindar servicios de atención más oportunos para la población vulnerable y mejorar sus resultados de salud. Sin embargo, la evidencia sobre el rol de estos mecanismos de pago es limitada en la región.

Objetivo: Analizar si el mecanismo de pago por desempeño propuesto por el Programa SUMAR -un programa de salud materno infantil implementado en Argentina en 2004 (entonces llamado Plan Nacer)-, tuvo un efecto causal en la reducción de la tasa de mortalidad infantil (<1 año), tasa de mortalidad neonatal (<28 días) y tasa de mortalidad de niños menores de 5 años en el país.

Métodos: Debido a que el Programa SUMAR fue implementado en Argentina y no en otros países de la región y/o de medianos ingresos, se utiliza el Método del Control Sintético para construir un contrafactual para el país de intervención a partir de una combinación convexa de un conjunto de potenciales países de control. Para ello, se construyó un panel de datos a partir de información publicada por el Banco Mundial, en donde las unidades de observación son los países de la región y de medianos ingresos y el periodo de tiempo analizado es 1990-2015, siendo Argentina la unidad tratada y el año 2004 el de inicio del programa.

Resultados: Luego de la implementación de los incentivos propuestos por el Programa SUMAR se observa una reducción moderada en la tasa de mortalidad infantil en Argentina en relación al control sintético. En particular, se observa una disminución de 1.41 puntos porcentuales (p.p.) en la tasa de mortalidad infantil, una reducción de 0.86 p.p. en la tasa de mortalidad neonatal y de 1 p.p. en la tasa de mortalidad en menores de 5 años. Estos resultados parecen ser robustos a una serie de experimentos placebo.

Discusión: Se espera que los resultados obtenidos en este trabajo contribuyan al debate informado sobre el rol de los mecanismos de pago y los resultados de salud infantil en los países de la región, con la intención de diseñar e implementar políticas sanitarias más oportunas y eficientes para la población vulnerable.
Improving quality of care in district by general practitioner; an experience from Nepal.

Co-authors: Sandesh Pantha-Myagdi District Hospital; Roshan Neupane-Myagdi District Hospital; Hema Joshi-Myagdi District Hospital; Neeraj Acharya-Myagdi District Hospital

Introduction:

Government health facilities in developing countries are often considered of poor quality. A district hospital should not only provide the basic services but should also provide some advanced services including surgical interventions. General Practitioners (GPs) have been far considered as the only drivers for specialist care in rural and remote areas of Nepal where there is lack of trained human resources. They can provide a variety of care to the patients, be it be surgical, orthopedic or obstetric emergencies.

Objective:

The objective of the study was to identify the variety of services provided in the hospital by a GP and the effect of the introduction of surgical services on the overall patient flow in the hospital.

Methodology:

An audit of the emergency and elective surgical care provided from the district hospital of Myagdi, a district in western Nepal over a period of fifteen months in between October 2013 to February 2015 was retrospectively reviewed. In addition HMIS data of district hospital was also reviewed to see the utilization of four service categories, emergency, in-patient, out-patient and the labor ward. Approval was taken from the district health office for the study.

Results:

We conducted 314 interventions under anesthesia. A variety of medical fraternity was covered by surgical services. After these services were introduced, there was nearly 20% increase in patient flow in all areas; outpatient, emergency and in the inpatient department. With further introduction of Caesarean Section services, number of deliveries conducted in the hospital increased and the need of referral for maternity care reduced from an average of 14 per month to 4 per month.

Conclusion:

Providing variety of services from the district hospital have improved patients' perception towards the hospital and subsequently increased service uptake. In addition, the need of referrals out of district also reduced. General Practice is a specialty that can produce leaders in the frontline health care in the rural and remote areas of the countries, where there is lack of trained human resources and country should develop more GPs in order to achieve SDG goal 3 and attain Universal Health Coverage and Health for All.

Key Words: General Practitioner, Rural Health Care, Obstetric Care, Surgical Care
Partnering with urban public health system to establish a formal maternity referral network: Lessons from Mumbai, India

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Background: Considering the shifting demographics to urban areas, strengthening public health system delivery to cater to large populations of urban poor is vital. Obstetric emergencies are often unpredictable, and having a strong referral system in place can prevent delays in accessing care and has potential to reduce mortality. SNEHA, a non-governmental organization, has been partnering with public health systems in the Mumbai Metropolitan Region to address health needs of pregnant women and newborn from vulnerable communities. Given this context, the study aims to explore how this partnership led to strengthening of the referral network between different levels of care within the urban public health system and to share learnings for establishing such a system in similar settings.

Methods: From 2013-2016, SNEHA partnered with 7 public maternity homes and a regional general hospital located in the western suburbs of Mumbai and their apex tertiary referral center located in the city to initiate a formal referral network between them. Data was analyzed for the periods January-June 2014 and January-June 2016. In particular, we looked at the documented referral rates to the regional general and tertiary hospitals and the percentage of patients who could be tracked to the receiving hospitals.

Results: Through a participatory process, a formal referral linkage was established, protocols and standardized documentation were introduced and regular interactions between providers were facilitated. Over two years, referral rate from the maternity homes to the regional general hospital increased by 16% (p≤0.05), while that to the tertiary hospital fell by 10% (p≤0.05), indicating more utilization of the regional referral center. The percentage of referred patients who could be tracked to the regional general hospital also increased by 23% (p≤0.05).

Discussion/conclusions: Participatory processes, regular interactions between service providers and evidence-based feedback were important to improve functioning of the referral network. To achieve Sustainable Development Goal 3 target of reducing global maternal mortality ratio to less than 70 per 100,000 live births by 2030, ensuring equitable access to quality maternal health care services is essential. Learning from such NGO-government partnerships can inform similar partnerships with public health systems for improving healthcare services for the poor and the most marginalized.
Manoj Pati, Karnataka Health Promotion Trust  
Abstract Id: 1604  

An Analysis of Gaps in Care of Non-Communicable Diseases (NCD) in India, and Programmatic Considerations for an Integrated Urban Primary Healthcare Model  

Co-authors: Manoj Kumar Pati-Karnataka Health Promotion Trust; Krsihnamurthy Jayanna-Karnataka Health Promotion Trust; Swaroop N-Karnataka Health Promotion Trust; Arin Kar-Karnataka Health Promotion Trust; Hemanth Madegowda-Landmark Group  

Population in low- and middle-income countries (LMICs) are at increased burden of non-communicable diseases (NCDs), and are more prone to die prematurely (80%, before age 70). At the adoption of the 2030 goals for sustainable development in 2015, NCDs were included in the global development agenda for the first time. Since then, much has been discussed on the need for an integrated approach to prevent and control NCDs not just in service delivery but in terms of engagement with range of non-health actors. However, the organization and integration of NCD related health services have faced several challenges in LMIC regions. India serve a good case to study these challenges as almost 61% of deaths are attributed to NCDs in the country. Although the national NCD program of India has been in operation since last eight years, challenges remain in integration of NCD services at primary care. Rapid urbanization, migration of working class to cities, unhealthy lifestyle, increased occurrence of NCDs at younger age, a more pronounced pluralistic health system in cities make such integration prospect even harder.  

We have identified gaps by means of observation of NCD care at few urban primary health centers (UPHC) and interactions with patients, PHC staff including frontline health workers, urban local bodies, community health groups, and people in the community. Further, a review of literature was conducted using MEDLINE (PubMed Central) and Google Scholar to identify gaps in current care environment for NCDs based on observations made earlier. We have organized our gaps using an adapted form of the WHO Package of Essential NCD (WHO PEN) interventions at primary care for LMICs that suits to the local context. The review of articles included about 65 peer-reviewed articles, reports and bulletin. Gaps identified fall primarily in four dimensions of integration at primary care: early screening, effective disease management, program management and monitoring systems and policy and research. At each of these dimensions’ current gaps and opportunities to engage with non-health actors (urban development bodies, community self-help group, education authorities) were identified. As part of an ongoing pilot project on strengthening continuum of care at UPHCs in Mysuru, India, this gap analyses reinforces the need for and provides a structure for an integrated model of NCD care at primary health care level. The model is of particular relevance to policy makers and decision makers at the state and district level.
Daniel Patino-Lugo, Universidad de Antioquia
Abstract Id: 3079

How do the government, a research funder and universities conceive the role of research evidence in the health system policymaking process?

Co-authors: Daniel Felipe Patino-Lugo-Universidad de Antioquia; Jhon Lavisq-McMaster University; Mita Giacomini-McMaster University; Brian Haynes-McMaster University

Background: Understanding the relationship between research evidence and health policy is fundamental for strengthening health systems. This paper addresses this relationship by studying the ideas embedded in the documents produced by the Colombian government, a Colombian research funder and Colombian universities about an evidence-informed health system. Methods: We developed an interpretive grounded theory from 38 documents produced by these actors from 2004 to 2013. Results: We found that the ideas raised in the sampled documents’ rhetoric revealed three main theoretical insights about the conceptualization of an evidence-informed health system: (1) governmental documents’ emphasis on the concepts of “knowledge society” and “innovation” puts more value on the contribution of research evidence to industry and the economic development of the country than to its contribution to the health system policymaking process; (2) according to government and Colciencias’ documents, the “citizens” or the “public” of the “knowledge society” need to appropriate scientific knowledge in order to be in a better position to demand the use of research evidence in policy decision-making process; and (3) the concept of “knowledge management” emerged from the Colciencias and universities’ documents to highlight the role of evidence from indicators and evaluation research in identifying health needs and informing coverage decisions. Discussion: Those persons interested in supporting the use of research evidence in the Colombian health system need to: (1) understand that the main ideas that define the role of research evidence in the Colombian government’s documents are not conducive to using research evidence to inform health systems decisions; (2) develop a broader understanding of what types of research evidence can inform the identification and definition of a health system problem, the framing of policy options, key implementation considerations and the monitoring and evaluation process; and (3) develop mechanisms to mobilize research evidence into the policymaking process.
COMMUNITY FACILITY FRAMEWORK STRATEGY TO ACHIEVE THE UNAIDS 90-90-90 GOALS IN RWENZORI REGION, BAYLOR UGANDA

Co-authors: Katamujuna Emilly Peace-Baylor- Uganda

Purpose:
While Uganda endeavours to achieve its 90-90-90 target, only 65% of people living with HIV knew their HIV status, 51% received ART in 2015. The challenge to achieving the sustainable development goals for health requires building a robust health system. Community structures, are key in delivery of health services with unique influence in advocacy and demand-creation. However, inadequate capacity and involvement in the formal health system weigh-down effective responses to TB, HIV and AIDS. Baylor, supported by CDC started Community Facility Framework, an innovation to strengthen linkages between communities and health facilities to achieve the 90 90 90 goals.

Focus/content:
25 Community Based Organizations and 49 PLHIV networks were identified based on agreed criteria and linked to 127 Baylor supported health facilities. Each CBO identified CHWs in proportion to client numbers within the catchment area to conduct linkages and referrals between health facilities and communities. CHWs work hand in hand with a focal person at the health facility referred to as the Linkage and referral Assistant to conduct referrals. Project officer, Linkage and Referral Supervisor and a Data Clerk coordinate activities for a successful linkage[1] and referral process.

Significance:
Community facility collaboration is key in addressing the challenges of fighting HIV and AIDS. The community structures do mobilize, sensitize, refer and follow up. Over 10,401 referrals have been made from community to facility and of these 8,340 were complete representing 80% success rate. While referrals from the facility to the community were 2557, of these 2032 were successful accounting for 80% success rate. By the end of 2017, in effort to achieve the 90:90:90 UNAIDS target by 2020, Rwenzori Region whose target is 87,626, has successfully enrolled 93% in care, 92% started on ART (80,749) and 91% of these (64,088) virally suppressed.

Relevance and Target Audience:
Community structures strengths in this linkage raises the need to better support their role in the community. CBOs, PLHIV networks, have led the way in creating complementary service delivery approaches. Their involvement in the formal health sector should be strengthened to successfully achieve Uganda's 90-90-90 goal. Community-led and participatory governance is also important not just to achieve immediate health outcomes, but also in strengthening health systems and their accountability to the populations they serve.
Diagnostic and Treatment Care pathways of Tuberculosis-Diabetes Mellitus co-morbid patients in India: Urgent need for initiating Public-Private Mix Initiatives for moving towards universal health coverage

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Background: In India although the link between Diabetes Mellitus (DM) and Tuberculosis (TB) has long been recognized, the looming threat of these convergent epidemics resulting into TB-DM comorbidity recently being acknowledged. In view of this, Indian Government recently developed National framework for joint TB-DM collaborative activities aiming to guide the coordinated programmatic response to deal with this double burden of diseases. However, the way in which this policy push for integrated services is playing out in practice within and across public and private health sectors has not been studied from patients’ perspectives. Against this background, research study was undertaken to know the patient experiences of accessing TB and DM care services while navigating these dual systems of care.

Methodology: A qualitative study was conducted among 23 TB-DM co-morbid patients registered at 3 TB diagnostic centres in peri-urban areas of North Delhi. In-depth interviews along with focus group discussions of patients were carried out for eliciting their experience of being co-morbid and challenges they came across while seeking care for their co-morbidity.

Results: Government tertiary care hospitals providing DM care are linked with TB centres to ensure bidirectional screening for TB-DM. However, feedback mechanism in prevalent referral system was not existent. Patients are getting firstly diagnosed for DM at either private or government laboratories. In addition to these laboratories, random blood-sugar level testing by digital glucometers was purchased by patients at private pharmacies. Among comorbid patients’ low awareness about DM, related complications, poor blood-sugar level monitoring and poor treatment adherence was observed. Patients shift on their own from government to private hospitals for seeking DM treatment due to long waiting time, unavailability of medicines and geographical distances. At the same time due to financial constraints patients also reported to return from private to government hospitals to receive DM medicines. Rarely, patients resort to self-medication and then stopped taking treatment for DM.

Conclusions: In the joint framework of collaborative activities counselling and support needs of comorbid patients ought to be strengthened. On the fragmented pathway of TB-DM care there is an emerging need to better coordinate TB-DM diagnostic and treatment services across public and private sectors to ensure continuum of care not only between the two National health programmes but across public and private sector providers and facilities as well. Such integrated and coordinated response for TB-DM comorbidity would help facilitate significant progress in moving towards universal health coverage in India.
Émilie Pigeon-Gagné, Université du Québec à Montréal (UQÀM)
Abstract Id: 3988

Faire une collecte de données sur la santé mentale dans un pays du Sud : réflexion sur les enjeux méthodologiques et épistémologiques.

Co-authors: Émilie Émilie Pigeon-Gagné-Université du Québec à Montréal (UQÀM); Samiratou Ouedraogo-École de Santé Publique de l'Université de Montréal (ESPUM); Valéry Ridde-École de Santé Publique de l'Université de Montréal (ESPUM)

Parmi les maladies non transmissibles, les troubles mentaux et comportementaux représentent 22,7% du fardeau mondial en termes de morbidité et de mortalité; équivalent ainsi à environ 450 millions d'individus touchés par ces troubles à travers le monde (OMS, 2014). Dans les pays du Sud, le manque de ressources et d'infrastructures limitent la capacité à connaître avec exactitude la prévalence, la progression et la distribution des troubles de santé mentale à travers les différentes populations (Okpaku et al., 2014). Le manque de données fiables sur la santé mentale dans les pays du Sud affecte grandement la volonté des agences internationales et des gouvernements à s'impliquer pour réduire le fardeau social et économique lié aux troubles mentaux.

La manière de concevoir la santé mentale et de déterminer des indicateurs pour en mesurer la prévalence n'étant pas consensuelle, ni universelle, les chercheurs en santé mentale mondiale se trouvent face à de nombreuses difficultés sur le terrain lorsqu'il en vient à construire un protocole de recherche ou à concevoir une intervention (Kirmayer & Pedersen, 2014). Dans cette présentation, nous souhaitons partager des leçons apprises à l'issue de deux collectes de données visant à évaluer l'état de santé mentale de personnes vivant en situation d'indigence en milieu rural au Burkina Faso - où les conceptions de la santé mentale demeurent peu connues et où un nombre important de personnes vulnérables rapportent un haut niveau de détresse psychologique (Pigeon-Gagné et al., 2017). L'ensemble du processus de recherche sera d'abord décrit sommairement ; une réflexion critique sera ensuite proposée mettant en dialogue les domaines de la santé publique et de la psychiatrie transculturelle. Les enjeux épistémologiques suivants serão discutés : 1) qu'est-ce qu'une donnée valide et comment l'obtenir?, 2) que doit-on mesurer et comment?, 3) peut-on généraliser les résultats ou sont-ils spécifiques au contexte?, et 4) comment traduire les résultats de recherche en formulation pour des politiques publiques de santé plus équitables. Ces questionnements mèneront la présentatrice à aborder concrètement des enjeux méthodologiques rencontrés en milieu rural au Burkina Faso : la coordination de recherche et les enjeux de pouvoir sous-jacents, le choix du type de support de collecte, la rigueur et la qualité psychométrique de l'outil et le choix de la population cible.

Nous conclurons en présentant des pistes de solution concrètes favorisant les partenariats multidisciplinaires.
Collectivise, educate and synergise: A model of a rural Dalit women's participatory campaign for revitalising community health system for inclusive maternal health care in India

Co-authors: Edward Pinto-Centre for Health and Social Justice; Chinnamma Muddanagudi-Jagrutha Mahila Sanghatan (JMS)

Background: Caste-class-gender based triple burden of discrimination is a key structural barrier for Dalit women’s participation in community level health system (HS). This paper presents the model and approach of Jagrutha Mahila Sanghatan (JMS), a rural Dalit Women Agricultural Labourers’ Collective in Karnataka (Raichur district), practised over two decades for addressing social exclusion in HS, through the processes of a participatory campaign for maternal health (MH), effective in bridging trust-deficit and enhancing collaborative community action. (www.jmschiguru.wordpress.com)

Design: The core team of seven semi-literate Dalit women along with 70 women leaders, through an orientation, designed campaign for MH. A pictorial survey tool was designed with the help of a local artist that depicted 30 ante-natal, in child-birth and post-natal services. The core team, after being trained, interviewed 234 Dalit women with child-birth in the preceding year (August 2016-July 2017) and held in-depth group discussions in 35 villages. Data were compiled and analysed in a participatory workshop which enabled women to interpret and communicate results. Findings were presented in a pictorial form using the traffic-signal colour code (green – good, yellow – average, red – poor service) and were developed as large banners with visuals, popular pamphlets, press-briefing and memorandum of charter of demands.

Using evidence for building the community – HS interface was the next phase of the campaign and included a fortnight long march across 35 villages, facilitating community discussions with front line health workers, holding formal public health dialogues in five PHCs, public meetings in two block headquarters with elected representatives and higher authorities of HS, and finally engaging district health authorities demanding action on the findings of community enquiry for improving MH services. Meanwhile, JMS briefed the media on the findings which created additional pressure on health authorities. The campaign resulted in a surge of Dalit women accessing PHCs, resolution of their pending grievances, appointment of nurses in two PHCs and promise of suitable action by elected representatives.

Conclusion: Community-led accountability is an iterative process of engaging communities, HS functionaries and multiple stakeholders in a creative, challenging and relatively non-confrontational dialogue at various levels. Collective power along with equipping community with knowledge of health services, continued process of engagement of multiple stakeholders and an imaginative use of the media, facilitate forging better relationships at the community and PHC level, and in exerting adequate pressure at the higher levels of HS to demand systemic accountability.
Community based social innovation for healthy ageing? evidence from middle- and high-income countries

Co-authors: Emma Pitchforth-University of Exeter; Ioana Ghiga-RAND Europe; Gavin Cochrane-RAND Europe; Paul Ong-World Health Organisation Centre for Health Development, Kobe; Loic Garcon-World Health Organisation Centre for Health Development, Kobe

Background

Globally, countries need to adapt health and social care systems to meet the complex needs of older people. This is particularly challenging where vertical health systems have dominated and where populations are ageing rapidly. Community based social innovations (CBSIs) are initiatives that seek to empower older people to improve self-efficacy in caring for themselves and their peers, with the aim of maintaining wellbeing through promoting social cohesion and inclusiveness as well as health, education and livelihoods related programs. Understanding the role of CBSIs and how they may link with health and other services to promote healthy ageing is crucial. We sought to examine evidence of effectiveness of CBSIs and to study current CBSIs to develop a typology to advance this understanding.

Methods

A systematic review of the evidence of effectiveness and cost-effectiveness of CBSIs in middle- and high- income countries (Prospero registration number 42016051622). In addition ten case studies, drawing on document review and key informant interviews (10-15 per case study) were conducted in middle income countries.

Results

44 papers were included. The CBSIs were diverse in nature of activities and outcomes reported. Most studies reported interventions having positive impacts on participants, such as reduced depression, though the majority were classified as being at medium or high risk of bias. There was no evidence on costs or cost-effectiveness and very little reporting of outcomes at an organisation or system level. The systematic review was used as the basis to develop our typology which was tested and refined through the case study analysis. We present the typology which classifies included CBSIs according to: (i) level of empowerment for older people; (ii) linkages with health and social care systems; (iii) scale, scope and complexity. Four ‘types’ of CBSIs are proposed on the basis of this differentiation and the relative advantages and challenges associated with each.

Discussion

Our study establishes the existing evidence base and uses this as a basis to understand a range of CBSIs in operation currently. The research suggests a number of potential benefits of CBSIs particularly in improving wellbeing, reducing isolation and developing person-centred care for older people but there is a need to improve understanding and measurement of impact on healthy ageing. The typology offers a starting point from which to develop conceptual understanding and, at an operational level, a means to map CBSIs and to understand challenges to evolving models of CBSIs particularly around scale up and sustainability.
A Linear Programming Model for Allocation of Medical Specialists in a Hospital Network

Co-authors: Nantana Suppapitnarm-Bangkok Dusit Medical Services (BDMS); Krit Pongpirul-Faculty of Medicine, Chulalongkorn University

Background
As human diseases are getting more complex, the need for medical specialist consultation is more pronounced and innovative ways to allocate medical specialist in hospital network are essential. This study aimed to construct allocation models using a multi-objective programming approach in a large private hospital network in Thailand.

Methods
Our study included 13 medical specialist types in four main disease groups of the Bangkok Dusit Medical Services (BDMS) network. The Mixed-Integer Linear Programming (MILP) models were developed using inputs from modified Delphi survey of executives, the Physician Engagement Survey (PES) and Physician Registry (PR) databases conducted in 2015 to feature three objectives: (1) minimizing travel expense, (2) optimizing physician engagement including the full-time status, and (3) maximizing the chance of direct patient encounters with respective medical specialists who were formally qualified for the clinical complexity of the patients, measured by Case Mix Index (CMI). The models were then tested with the PES & RUR 2016 data.

Results
The constructed models included the core components (travel expense and physician engagement level) but varied by a combination of whether part-time medical specialists are included (PT) or not (noPT) and whether CMI is included (CMI) or not (noCMI). Because the noPT+CMI model had the highest capability to solve for specialist allocation, it was further improved for some specialist types in terms of flexibility for sensitivity analysis of the variables. Moreover, to assess the feasibility and practicality of the models, a web-based system incorporating the final model was developed to support the central executives’ decision to allocate medical specialists to the network, especially for finding the most optimal and timely solution for widespread shortages.

Conclusions
The linear programming models that accommodate critical components for allocating medical specialists in the hospital network were feasible and practical for the timely decision-making by the central executives. The models could be further tested for their application in hospitals in the public sector or other private hospital networks.
Improving availability of health services in rural & left out areas: Learning from Rajasthan, India

Rajnish Ranjan Prasad - IIHMR University; Shrutika Naandial Badgujar - Tata Institute of Social Sciences; Shweta Bhardwaj - FHI

Background – Addressing geographical inequity in terms of availability of health services is very important to achieve the SDGs and unavailability of health services in rural & difficult areas results in lesser utilization among women & people from vulnerable sections of the society. In order to address the same, an initiative was undertaken in Rajasthan state, which is one of the most socio-economically backward states in India and it accounts for the 5.67% of the total India’s population. Rajasthan lags behind the country on most of the socio-economic and health indicators. Difficult geographical terrain further compounds the health challenges as large part of the state is either desert or tribal areas. Recruitment and retention of staffs for providing public health facilities in these areas, was a major challenge. More than 30% position of medical staffs in these areas were vacant.

Method - To improve the recruitment and retention of medical staffs, Government of Rajasthan initiated a scheme to provide hard duty allowance to service providers in 13 desert and tribal districts. All the health facilities in these districts were assessed on set of indicators and were divided into three level of vulnerability & based on that, differential incentives were decided for medical and nursing staffs.

Results - After, one year it was found that vacancy in the position of medical & nursing staffs was reduced by around 17.5% and 22% respectively. There was also more than 25% increase in OPD patients and 13% in IPD patients. Besides that, more than 25% staffs also started staying at the health facilities. This resulted in improvement in service utilization in the night time. However, there were also district wise variations.

Conclusions: Provision of differential cash incentive scheme can help in improving the retention of staffs in difficult areas. However, the performance indicators need to be clearly defined in advance and payment of incentive should be in timely & transparent manner.
Institutionalising Leaving No One Behind through the platform of hospital based Social Service Units in Nepal

Co-authors: Sitaram Prasai-Nepal Health Sector Support Programme; Arun Gautam-Ministry of Health, Nepal; Rekha Rana-Nepal Health Sector Support Programme; Deborah Thomas-Nepal Health Sector Support Programme

Background: Historical social exclusion has driven political change in Nepal. Post-conflict structural changes led to the right to health in 2007, the introduction of free primary health care in 2009 and commitment to subsidised health care at the secondary and tertiary level for targeted groups in 2009/10. From an initial pilot in 2012, a new institutional structure, Social Service Units (SSU) was created at selective public-sector referral hospitals to administer the provision of subsidised services to targeted vulnerable populations. To reduce the burden on strained hospital workforce and management, local NGOs are contracted by government to administer SSUs.

Methods: This study draws on the findings of an evaluation of the performance and cost-benefit of SSUs at eight hospitals in 2015 and subsequent annual reviews of SSUs by Ministry of Health (MoH) as they have been scaled up to an additional 16 hospitals. Data collection methods included interviews with MoH sector managers, management and health providers at selected referral hospitals, NGO implementing partners and SSU client beneficiaries.

Results: More than 350,000 target group patients have received subsidized services from SSUs with the majority classified as either poor (44.5%) or senior citizens (43.8%). Greater achievements have been made in hospitals where management has created a conducive environment for contracted NGOs to operate in, and NGOs have brought a spirit of volunteerism.

SSUs have shone a light on a range of political economy challenges including the lack of transparency in management of multiple hospital budget lines and tension between policy commitments and resource allocations. While they cannot solve these higher order problems, the governance arrangements of SSUs elevate problems to hospital boards and the MoH. In 2016, SSUs absorbed administration of other targeted programmes at referral hospitals including social insurance. The model is now being scaled up to teaching, private and community hospitals to support them achieve their own social responsibility targets. The government also plans to take the model down to district hospitals.

Conclusion: Political change forced the MoH to address stark health inequalities. Government ownership of SSUs, and their saving of hospital staff and management time has enabled SSU adaptation and institutionalisation. The move to federalism will now restructure authority over hospitals however the political appeal of SSUs may work in their favour.
Trends in Statin Utilization and Cardiovascular Mortality at the Global, Regional and Country-Level, 2002-2012

Dima Qato, University of Illinois at Chicago

Abstract Id: 4003

Research Objective: Regional and country-level differences in statin utilization may be an overlooked contributor to worsening disparities in incidence of CVD and CVD-related mortality globally.

Study Design: We used retail prescription sales data obtained from IMS Health for World Health Organization (WHO) Anatomic Therapeutic Chemical (ATC) codes relating to cardiovascular disease (CVD) and statins from 2002 to 2012. Statin medications were aggregated and utilization was calculated for each country, by region and globally for each year. We used the WHO defined daily dose (DDD) methodology, often used to evaluate drug utilization patterns using aggregate data, to calculate utilization defined as DDDs per 10,000 persons with high serum cholesterol for each country. Age-standardized DALYs per 1,000 inhabitants due to high serum cholesterol were obtained from the GBD 2010 study for the years 2000, 2005 and 2010.

Population Studied: Eighteen countries were included in this study: (1) High-income (United States, United Kingdom, France, Norway); (2) upper middle income (Argentina, Mexico, Poland); (3) lower middle income (Bulgaria, Brazil, Colombia, Egypt, Indonesia, Jordan, Philippines, Thailand); and (4) low income (Bangladesh, India, Pakistan).

Principal Findings: Globally, statin utilization significantly increased by 7.1 DDDs/year between 2002 and 2012. However, there was significant variation in utilization patterns between and within regions. While all countries experienced a growth in statin utilization during this time period, it was significantly, and persistently, greater in high income countries than developing countries. The percent change in CVD deaths declined for several developing countries (Egypt, Philippines, Thailand) and in France, while all other counties experienced an increase in CVD deaths. All these countries with increases in CVD also experienced a decline in high cholesterol, but an increase in CVD deaths attributable to high blood pressure and high blood glucose, which increased in these countries.

Conclusions: Our findings indicate that statin utilization has increased globally, but disparities in use persist between high income and developing countries. Despite the growing use of statins, however, CVD mortality has only declined in a few countries.

Implications for Policy or Practice: Global efforts to reduce CVD burden by promoting the use of statins should also focus on improving access to, and use of, medicines to treat and control high blood pressure and diabetes, particularly in developing countries.
Mary Qiu, ThinkWell Global
Abstract Id: 3986

Identifying Health Policy and Systems Research Priorities for the Sustainable Development Goals: Social Protection for Health

Co-authors: Mary Qiu-ThinkWell Global; Nasreen Jessani-Johns Hopkins Bloomberg School of Public Health; Sara Bennett-Johns Hopkins Bloomberg School of Public Health

Introduction: There is an established body of evidence linking systems of social protection to health systems and health outcomes. In the recent adoption of the Sustainable Development Goals (SDGs), this linkage has been further emphasized as being necessary to achieving both health and non-health goals. Existing literature around social protection and health has focused primarily on that of cash transfers, specifically conditional cash transfers (CCTs). We sought to expand on this field of research by identifying potential research priorities around social protection and health in low and middle-income countries.

Methodology: We identified a list of 31 priority research questions through two sources: 1) an overview of reviews on social protection interventions and health 2) interviews with 54 policy makers from ministries of health, large multi-lateral or bilateral organizations and NGOs. Researchers from around the globe were then invited to refine and rank these questions using an online platform.

Results: The overview of reviews identified 5 main categories of social protection interventions: cash transfers; financial incentives and other demand side financing interventions; food aid and nutritional interventions; parental leave; and livelihood/other social welfare interventions. Policy-makers focused on the implementation and practice of social protection and health, how social protection programs could be integrated with other sectors and programs, and how to best monitor and evaluate such programs. The top 10 research questions that emerged focused heavily on design, implementation, and context, with a range of interventions that included cash transfers, social insurance, and labor market interventions.

Conclusion: The divergence between the results of the overview of reviews and both the policy-maker interviews and final ranking of questions may speak to a broader need for researchers and funders to consider how social protection and health integrate across other programs, services, and sectors. Research priority setting exercises such as this can contribute to aligning research funder investment, researcher effort and policy-maker evidence needs.
Why are primary healthcare clinics run by non-government organizations (NGO) losing their market share to the private sector in Bangladesh?

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Smiling Sun (SS) Clinics, supported by the USAID-DfID NGO Health Service Delivery Project, aim to supplement the Government efforts to maximize utilization of essential service package and improve health of Bangladeshi people. One prime focus of SS clinics is to serve the poor with free of cost or minimum service charges, but with acceptable quality both in rural and urban settings. The clinics serve 26 million people (16% of Bangladesh population) through a nationwide network of 25 national NGOs, 399 static clinics, 10,754 satellite clinic sessions, and 8,316 community service providers.

The SS Clinics started in 1998 with technical and financial support from USAID with an aim that a healthcare network would evolve and be self-sustained in terms of financial and technical capabilities over a medium- to long-term period. There is a modest service charge, which helps subsidization to the clients who are unable to pay. Despite the provision of service fee, the clinics remain dedicated to low- and average-income clients.

The use of essential healthcare in the SS Clinics-served areas is comparable to that in areas served by the government or other NGOs. The outstanding achievement of the program is the higher healthcare utilization among the lowest quintile than the lowest-quintile group in comparison areas. But the emerging challenge is that SS clinics are losing their market share. In this study, we undertake a trend analysis to explore the reasons for the shrinking market share of SS clinics. We use data from seven large-scale household surveys conducted during 2001 through 2017 in project and comparison areas.

We find that utilization of essential healthcare substantially increased over time, but SS clinics market share declined, mostly to the private sector. In the initial years, most clients sought care at satellite clinics but with recent economic growth, even the poor now seek services from static clinics, the majority of which are from the private sector. The private-sector static clinics offer a wider range of services with qualified providers available at convenient timings and locations. These are strategies which with which SS clinics will have to compete, while ensuring greater quality of care and affordability as a priority. We propose interventions that SS clinics may undertake to establish a sustainable healthcare network to maximize the coverage of high quality essential healthcare, especially for the poor.
Birth registration coverage in low- and lower-middle-income countries lags behind Bacillus Calmette–Guérin immunization and antenatal care use

Co-authors: Md Hafizur Rahman-Johns Hopkins Bloomberg School of Public Health; Amber Bickford Cox-Johns Hopkins Bloomberg School of Public Health; Samuel L Mills-The World Bank

Background:

Civil registration and vital statistics (CRVS) systems lay the foundation for good governance by increasing the effectiveness and efficiency of delivery of public services, providing vital statistics for the planning and monitoring of national development, and protecting fundamental human rights. Birth registration provides legal rights and facilitates access to essential public services such as health care and education. However, more than 110 low- and middle-income countries have deficient CRVS systems. CRVS systems feature prominently in the UN Sustainable Development Goals (SDGs) while SDG target 16.9 stipulates “by 2030, provide legal identity for all, including birth registration”. Immunization systems, which are used to record and track childhood immunizations, vary in coverage and quality. Increasing use of effective immunization systems in low- and lower-middle-income countries has been an important public health success in the past decade. Unfortunately, in many countries, national birth registration rates continue to fall behind childhood immunization rates.

The objectives of this study are to (a) explore the status of birth registration and routine childhood immunization in low- and lower-middle-income countries, (b) analyze the pregnancy-related indicators in relation to birth registration in low- and lower-middle-income countries, and (c) identify the gaps between birth registration and immunization systems, in low- and lower-middle-income countries using demographic and health survey (DHS) and multiple indicator cluster survey (MICS) data.

Methods:

We constructed a database using DHS and MICS data from 2000 to 2015, containing information on birth registration and immunization coverage rates, antenatal care (ANC), birth and delivery indicators and post-delivery care indicators. Seventy-three countries including 31 low-income countries and 42 lower-middle-income countries were included in this exploratory analysis.

Results:

Of the countries with the largest disparity between birth registration and BCG vaccination, five are from Sub-Saharan Africa (Chad, Ethiopia, Guinea-Bissau, Tanzania, Uganda,) and three from South Asia (Bangladesh, Nepal, Afghanistan). Countries with the lowest birth registration rates and under 50% coverage for four or more ANC visits include Somalia, Ethiopia, Chad, Tanzania, and DRC. In DRC and Vanuatu the rates of facility deliveries are 79% and 80%, respectively, while their birth registration rates are less than 25%.

Conclusion:

The gap between birth registration and immunization coverage in low- and lower-middle-income countries suggests the potential for leveraging immunization programs to increase birth registration rates. Engaging health providers during the antenatal, delivery, and postpartum periods to increase birth registration may be a useful strategy in countries with access to skilled providers.
Community participatory planning in maternal and newborn health in rural Bangladesh

Co-authors: Ahmed Ehsanur Rahman -icddr,b; Tapas Mazumder-icddr,b; Janet Perkins-EdM

Background: Promoting community participation in health services planning is one important action area for improving the health and well-being of women and newborns globally. The World Health Organization has proposed a process for integrating community participation maternal and newborn health (MNH) services planning. This Participatory Community Assessment (PCA) is a health systems-led process whereby MNH stakeholders including community identify MNH related problems and contextualized interventions to address these. The International Center for Diarrheal Disease Research, Bangladesh (icddr,b) and the NGO Enfants du Monde recently supported Ministry of Health and Family Welfare (MOHFW) in Bangladesh to conduct a PCA in the district of Brahmanbaria.

Methodology: The first phase of the PCA consisted of a situation analysis, followed by five community roundtable discussions. In total, seven roundtable discussions were performed in two sub-districts with: mothers (; 2), health care providers (; 2), influential family members (; 1), husbands (; 1) and community leaders (; 1). One hundred thirteen participants took part in the roundtable discussions. Following the roundtables, an institutional forum was held bringing together representatives from each roundtable, with other government and other development partners

Findings: The PCA highlighted a number of factors operating at household, community and health services level which prevent women and newborns from enjoying optimal health. Related to the capacities of women, community members expressed that women and families are not aware of the importance of planning for birth and potential complications and the importance of utilizing skilled maternal and newborn health services around the time of pregnancy and birth. In terms of awareness, priority problems identified included low awareness of women’s rights related to MNH and low awareness of adolescent health needs, including the risks of early marriage. In terms of the quality of MNH services, community members expressed that women do not feel that their preferences and privacy are respected within the health services and that they are not satisfied with the interpersonal skills of health service providers. A number of solutions were proposed to address these priority concerns, including health education and capacity building of the health workforce.

Conclusions: The PCA process was successful in identifying MNH priorities which were not identified through a situation analysis and possible contextualized solutions. It was also successful in allowing community voices and expectations to be included in the routine health systems.
Strategic communication for universal health coverage in Bangladesh: Stewardship for translating awareness to action.


Background

Strategic communication is the umbrella term for the full range of advocacy and stakeholder engagement efforts. Engagement of relevant stakeholders, clear strategic communications, and effective stewardship are urgently needed to better understand and raise awareness about universal health coverage (UHC). This was identified in a recent assessment in Bangladesh by USAID and its Health Finance and Governance project; this is particularly relevant in Bangladesh as the country aspires to reach middle-income country status and achieve the SDGs. Policy reform for UHC requires local ownership and customized strategies for specific contexts. Diverse stakeholders desperately need to be engaged including political leaders, academia, health care purchasers, providers, local government, media, policymakers, and civil society groups – and each audience requires orchestrated tailored communications approaches to enhance their role in taking the UHC agenda forward through implementation. A program on building awareness on UHC in Bangladesh is leveraging platforms and sustaining mechanisms to build UHC awareness and translate knowledge into action.

Purpose and methods

Multi-dimensional UHC communication among different strategic stakeholders was initiated to build a “critical mass” of professionals who can move forward the UHC agenda in Bangladesh. Activities include orientation sessions, courses, policy discussions, civic walk, TV talk shows, and multi-stakeholder regional dialogues. This entails reaching out and supporting stakeholders, drawing across relevant sectors, to share the concept of UHC and its components for overcoming the challenges to achieve UHC agenda in Bangladesh.

Significance

The call to action for UHC, in the context of the SDGs, has allowed for renewed multisectoral engagement for action, including health, finance, local government, and media, among others. An effective platform is being created to discuss and debate on the opportunities, challenges, and prospects of UHC in Bangladesh. Awareness is being built on stakeholders’ roles, responsibilities, and entitlements. The program is helping to rethink on policy formation and legitimation, constituency building, resource mobilization, and the importance of stewardship. UHC champions are being identified who will serve an important stewardship role in further promoting and building awareness about UHC, capturing facts, data, and success stories to help sustain UHC messages. This will be important, as UHC knowledge will need to be translated into specific action for real progress on UHC. Documenting and sharing such action and the progress will support the global agenda for UHC, beyond Bangladesh.

Field-building dimension: Platforms and mechanisms to share and translate knowledge
Alok Ranjan, Tata Institute of Social Sciences
Abstract Id: 2516

Public-private dichotomy as a mode of service provisioning and progress towards universal health coverage in India: Evidence from 71st Round of National Sample Survey

Co-authors: Alok Ranjan-Tata Institute of Social Sciences; Sundararaman Thiagarajan-Tata Institute of Social Sciences

Background: Universal Health Coverage (UHC) has emerged as a major health policy discourse around the world in recent times. Some of its proponents have even proclaimed it as third major transition after demographic and epidemiological transition, whereas others have called it as “old wine in new bottle”. Historical evidence shows that most of the countries have achieved good health under publicly funded health system which was even proposed by Alma Ata Declaration in 1978. But over the period of time private sector has emerged as a major service provider in many developing countries and even in India too. The current study aims to explore the role of service provisioning as a mean towards achieving UHC in India. This study is based on India’s National Sample Survey-71st Round, which is one of the robust data set present in the current situation.

Methodology: Data collection under 71st Round of National Sample Survey was done for 65932 households (rural: 36480, urban: 29452) in India which included 3, 33,104 individuals (male: 1, 68,697 females: 1, 64,407). Type of service provider, inpatient, and outpatient care, out of pocket expenditure (OOPE), catastrophic health expenditure at 10% (CHE-10) and impoverishment due to hospitalization cost were taken as outcome variables for the study. Bivariate and multivariate analysis were main analytical methods for the analysis.

Results: In India, 56% of hospitalization care and 74% of out-patient care was under private provisioning. However, 69% of the poorest rural population used public provisioning for hospitalization. OOPE for hospitalization under public provisioning was Rs. 4638 (USD 77) whereas it was Rs. 21662 (USD 361) under private provisioning. Also, 61% of households who went for hospitalization in private provider reported CHE-10 whereas in public provisioning it was 16%. Chances of facing impoverishment due to healthcare expenditure were 3.1 (OR) times (95% CI: 2.7-3.5) higher under private provisioning compare to public provisioning. Households who went to private provider, 23% reported borrowing as a major source of financing whereas in 14% reported in public provisioning. Under public financing and private provisioning in terms of publicly funded health insurance, only 1.7% hospitalization episodes had cashless care.

Conclusion: In India, tax-funded public provisioning is a major source of financial protection to lower socio-economic population. Cost of care under private provisioning is manifold higher compare to public provisioning, and it is inequitable in nature.
Contested notions of 'quackery': a challenge to the aspiration of integrated medicine in India

Co-authors: Neethi V Rao-Institute of Public Health; Upendra Bhojani-Institute of Public Health; Meena Putturaj-Institute of Public Health

India has a pluralistic health system with allopathic providers co-existing with practitioners of Ayurveda, siddha, homeopathy and several other healing traditions. The government has formalized some of these under the umbrella of AYUSH (Ayurveda, Yoga, Unani, Siddha and Homeopathy) with a dedicated ministry, facilities and a cadre of government AYUSH doctors. Even in the private sector, AYUSH practitioners often out-compete allopathic professionals due to advantages of cost, familiarity and people-centricity, becoming the first point of contact especially in rural underserved communities.

Plagued by a shortage of human resources, the government has proposed to introduce a bridge course for AYUSH practitioners, allowing them to practice allopathy alongside traditional medicine. The proposal has been condemned as legitimizing “quackery” by organized voluntary associations of doctors and hospitals. Practitioners of AYUSH and other Indian systems of medicine have their own definitions of quackery, which are sometimes at conflict with each other.

A large portion of the complexity of the health system, the conflicts among stakeholders and poor quality of care in the private sector arises from a lack of standardization of care. Often the accepted quality standards for clinical care are only applicable to allopathic care. This leads to all practitioners of non-allopathic medicine being labelled as “quacks”.

In fact, the term “quack” has no legal basis with different policy actors co-opting the term to suit their own vested interests. In practice, allopathic practitioners commonly recommend non-allopathic treatments and vice-versa. Historically there have been several instances where drugs and techniques from one discipline have been integrated with others, defying the notion of self-contained systems of medicine.

Integration of Indian systems of medicine in the mainstream is a stated policy priority (as reflected in the National Health Policy). Tackling the dual burden of diseases will require mobilization of all practitioners and innovations in task-shifting. The political and pragmatic goal of inclusive healthcare is in line with healthcare practice but runs counter to the dominant discourse defining cross-practice as quackery.

Community health systems are concerned with outcomes beyond health, expanding into domains of social justice, dignity and autonomy. The definition of malpractice and quackery along the lines of codified medical practice does not take into account the societal significance of health services in a poor country like India. Defining rigid boundaries for systems of medicine and delegitimizing community health practitioners as quacks may therefore be counter-productive to the overall aim of universal health access.
Implementation Research on Close-to-Community Providers: Learning from REACHOUT Bangladesh

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Background: REACHOUT Bangladesh, led by James P Grant School of Public Health, BRAC University, is an implementation research to strengthen capacity of Close-to-community (CTC) providers. It explored methods to improve uptake of research findings into practices in sexual and reproductive health services. In Bangladesh CTCs are first points of referral contact and vital for bridging communities to health facilities. This paper describes the process of designing evidenced-based interventions to provide quality menstrual regulation (MR) services by CTCs through improving referral systems. In Bangladesh while abortion remains illegal except for saving a woman’s life, the term “MR” allows terminating pregnancies within 6-12 weeks after a missed menstrual period.

Methods: This research was conducted in three phases: context analysis, design intervention and implementation through quality improvement (QI) cycles in two non-governmental organizations. Quantitative and qualitative methods assessed the effect of QI components of intervention, process indicators and programme efficiency.

Findings: Context analysis showed that developing effective strategies and policies defining responsibilities of CTCs are critical in maintaining sustainable referral networks. Intervention included training on facilitative referral and supportive supervision for CTCs and their supervisors, and revised referral cards.

Before intervention, punitive supervision approaches, irregular field supervision, and lack of feedback often put CTCs in vulnerable situations when providing MR services. Due to referral incompetency of CTCs, clients were unaware about the window of time for safe MR provision. Often they were uninformed about appropriate referral places and expenses which forced them to seek unsafe abortions from clandestine operators.

Increased field supervision, timely feedback to solve field challenges, positive attitude of supervisors and supportive working environment resulted in improved relationship between supervisors and CTCs. It strengthened CTCs’ challenge-mitigating skills in field and increased motivation. Referral training made them confident through increased knowledge, better counselling techniques, networking with other providers, and helped save clients from clandestine operators. Revised referral cards helped track clients, maintain documentation and ensure referral fees to referrers. During intervention, 66.7% of revised referral cards were provided to clients and service uptake increased from 22.8% to 34.3%. Institutional capacities were strengthened by developing master trainers. Implementing organizations incorporated parts of the REACHOUT training in their basic training and continue to use revised referral cards.

Conclusions: To ensure smooth facilitation, sustainability and scale-up of interventions, it is critical to develop program components considering the contextual needs of the target population within what is acceptable and achievable in the existing health system.
Implementation Research to test approaches to rolling out tools for the health sector response to violence against women: Formative research in Maharashtra, India

Co-authors: Sangeeta Rege-CEHAT; Avni Amin-WHO; Sarah Meyer-WHO; Prachi Avlaskar-CEHAT

Violence against women [VAW] is a major public health problem, a gender inequality issue and a human rights violation. The World Health Organization has published several tools providing evidence-based guidance to health providers to strengthen capacity to respond to VAW: the 2013 clinical and policy guidelines, Responding to intimate partner violence and sexual violence against women, and two tools to translate the guidelines into practical “how to” instructions and job aids, for health providers and managers. The World Health Organization and Center for Health and Enquiry into Allied Themes (CEHAT), based in Mumbai, India, is implementing formative research which aims to pilot and validate how best to apply or roll out these materials through a package of training and service delivery improvement activities. Methods: Two components of the formative research are: Stakeholder meetings: assessment of needs and priorities of stakeholders were obtained using participatory methods, including workflow mapping, to determine aspects of training of health care providers; and Pre and post-training quantitative assessment: health providers will be trained to identify survivors and provide first-line support. Pre and post-training assessment of health care providers’ knowledge, attitudes and practices of VAW pre and post training, as well as 6 months after training, will be conducted. Results: Stakeholder meetings indicated aspects of workflow, capacity and structure of clinical duties that informed adaptation of the content and delivery of training, post-training support and activities to support changes in clinical practice. Pre and post-training quantitative results indicate health care providers’ baseline knowledge and changes after training of: best practices in relation to identification, response and support to women experiencing violence, attitudes towards women experiencing violence and health provider role in providing support, and perceived self-efficacy, competence to provide quality care to women affected by violence. Discussion: There are several gaps in understanding how countries can implement the clinical handbook and the manual for health managers in order to improve quality of care for women subjected to violence. This formative research i) indicates feasible methods to assess needs for training adaptation and measure training outcomes, ii) suggests effective methods to implement health sector tools in order to effectively improve health care providers’ performance and health system/service readiness in response to VAW, and iii) forms the basis of a rigorous, experimental Phase 2 study of a package of activities, to assess improvements on health care provider performance and health service readiness.
The medical and non-medical costs of treating mental illness in Indonesia

Co-authors: Sutyastie, S Remi, Universitas Padjadjaran; Adiatma Y.M Siregar, Universitas Padjadjaran; Deni K. Sunjaya, Universitas Padjadjaran

Background:

Estimating the costs of mental illness within the Indonesian context is necessary to understand the severe economic impact of the disease. This study estimates the medical and non-medical costs of providing inpatient care to treat mental illness in Indonesia.

Method:

We conducted costs analysis in a main mental health hospital in West Java. We collected utilization, number of cases, costs, and resources data from 2014 to 2015, and employ micro-costing to estimate medical costs. Non-medical costs were derived from another study within the same setting, encompassing patients’ and their families’ travel, meal, and opportunity costs.

Result:

Most patients are male (70%) and suffer from schizophrenia paranoid (30%). The highest average treatment cost per person is US$481.61, and the lowest is US$176.81 for patients paying privately, while the highest is US$449.69, and the lowest is US$314.50 for patients using social insurance. The largest components for both groups is room and administration cost. The non-medical cost is US$221.21 per patient per episode, and 75% comes from productivity loss of patients and their families.

Conclusion:

The total of medical and non-medical costs of treating mental illness are large, surpassing the patients’ and their families’ income, and may create a substantial financial burden.
Towards weaving Health, Information Technology and Happiness in Bhutan: Factors that influence the adoption of telemedicine among the end users in Bhutan

Co-authors: Namgay Rinchen-Tsimalakha Hospital, Ministry of Health, Royal Government of Bhutan

Background and objectives: With rapid economic development and explosion of population, the healthcare service demand is ever increasing worldwide. Bhutan faces the challenges in access as well as sustainability of providing “free access to basic public health services in both modern and traditional medicines” as mandated by the constitution of the kingdom. The mountainous geographical topography, isolated communities and severe shortage of doctors (3 per 10,000 population) makes delivery of quality care a challenge. The country needs innovative cost effective ways to deliver health services to achieve Universal Health Coverage (UHC) and sustain free healthcare services. Telemedicine is one such technology envisioned in the country by the 4th Monarch as an alternative to optimize the use of limited resources by overcoming the time, cost and distance barrier. The National Health Policy 2011 thus adopted that “use of eHealth and telemedicine shall be pursued as alternative and complementary methods to enhance access ….”. Since then numerous donor driven projects have been piloted/implemented in a top down approach, with no appreciable outcome and impact. Even with massive improvement in telecommunication infrastructure and facilities, Telemedicine never really gained the momentum. Its time it gets reinvigorated with evidence based inputs and perhaps a change in approach to bottom up may be an alternative to be tried to salvage this ailing programme.

The objective of the study is to:

Analyze the current situation on the practice of telemedicine amongst the end users (clinicians) in Bhutan.

Identify the individual and contextual factors that influence the use/adopter of telemedicine among the end users in Bhutan.

Study design and Methods: This will be a cross-sectional survey with self-administered questionnaire among all the potential end users of telemedicine in Bhutan (N ~350). Questionnaire will contain questions on socio-demographic details, knowledge, attitude, current practice, behavioral intent of the clinicians in practicing telemedicine and questions framed using the social behavioral model of ‘stages of change’ and ‘diffusion of innovations”.

The outcome variable will be end user’s level of practice or the behavioral intent to use telemedicine. Bivariate analysis will be done to find out the significant predictor variables and backward multivariable logistic regression analysis will be applied to assess the significant predictors while controlling for confounders.

Implications: The results will be helpful to guide policy makers in situational analysis, benchmarking, setting goals, formulation of strategies and monitoring and evaluation planning for incorporating telemedicine in the mainstream healthcare.
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Abstract Id: 517

¿Cómo llegar a las niñas y mujeres más difíciles de alcanzar? Oportunidades en los servicios de salud reproductiva en escenarios de conflicto armado en Colombia.

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Antecedentes: La buena salud de las niñas y las mujeres es esencial para el desarrollo sostenible, y aunque algunos aspectos han mejorado en las últimas décadas sustancialmente, como es el caso que las prioridades de la salud de la mujer ahora se centran en un marco más amplio de derechos y de salud sexual y reproductiva, todavía hay mucho trabajo por hacer en poner a las niñas y mujeres primero en las políticas. En particular, aquellas más vulnerables en situaciones de conflicto y post-conflicto. Este análisis descompone la desigualdad en el acceso a los servicios de salud reproductiva y materna entre mujeres afectadas por el conflicto armado en Colombia.

Métodos: Esto se logró a través de los siguientes enfoques: En primer lugar, evaluamos las brechas y gradientes en tres indicadores (planificación familiar, atención prenatal y partos con personal calificado). En segundo lugar, analizamos los patrones de desigualdad y los cambios a lo largo del tiempo (índice de desigualdad de la pendiente para describir brechas, y el índice de concentración para describir gradientes). Y finalmente, identificamos desafíos y oportunidades para llegar a las niñas y mujeres más difíciles de alcanzar en contextos de conflicto armado. Las fuentes de datos utilizadas incluyen el SISPRO, DANE, Registro Nacional de Víctimas y Encuesta Nacional de Demografía y Salud (ENDS) 2005, 2010 y 2015.

Resultados. A pesar que el número de niñas y mujeres afectadas por el conflicto armado disminuyó en un periodo de diez años, nuestros hallazgos muestran que las desigualdades absolutas disminuyeron con el tiempo, las desigualdades relativas permanecieron sin cambios y en algunos casos empeoraron. Todas las medidas indicaron un patrón de desigualdad común: exclusión marginal y patrones incrementales de desigualdad en los servicios evaluados. En resumen, el conflicto armado ha amenazado el progreso de la salud sexual, reproductiva y materna y reforzado las inequidades ya existentes en Colombia.

Discusión: A partir de la evidencia generada es posible identificar algunos mensajes claves que incluyen:

i) Necesidad de comprender los distintos patrones de desigualdad identificados en este estudio, con el fin de implementar mejores respuestas orientadas a la equidad.

ii) Adapta servicios de salud centrados en las personas y acercarlos a las niñas y mujeres con necesidades insatisfechas en salud sexual y reproductiva.

iii) Reforzar las estrategias con enfoque de equidad de género, hombres juegan un rol importante para lograr esto, con el objetivo de reducir la exclusión social.
MATCH: Mapping and Analysis for Tailored disease Control and Health systems strengthening

Co-authors: Ente Rood-KIT Royal Tropical Institute; Ahmadul Hasan Khan-National Tuberculosis Control Program, Bangladesh; Christina Mergenthaler-KIT Royal Tropical Institute; Margo van Gurp-KIT Royal Tropical Institute; Mirjam Bakker-KIT Royal Tropical Institute; Lucie Blok-KIT Royal Tropical Institute

Introduction

Global efforts to end the TB epidemic by 2030 (SDG3.3) have not been effective to significantly reduce the burden of TB worldwide. As the TB epidemic is context specific and geographically heterogeneous, targeted interventions focusing on specific areas and high risk populations are required to improve the timely detection and treatment of TB.

We present a new analytical framework, using GIS and spatial statistics, to analyse and predict TB case notification rates (CNR) at a high level of geographic disaggregation in Bangladesh. We show how GIS can be used to identify trends in CNR, which would remain undetected when using conventional analytical methods.

Methods

TB case notification rates (CNR) and programmatic performance indicators for the 483 sub-districts of Bangladesh were collected and mapped. These data were complemented with socioeconomic data obtained from the Bangladesh national population census as well as laboratory testing data at district level.

To assess the existence of geographic trends, Local Indicators of spatial autocorrelation (LISA) were calculated. Simultaneous autoregressive spatial models were then fitted to the data to estimate the expected number of TB cases notified by the program within each sub-district. These models take into account health program factors which are known to affect TB occurrence, detection and diagnosis while explicitly accounting for spatial dependencies between individual sub-districts and their surrounding sub-districts. Model predictions were then compared to observed numbers TB cases notified to identify areas where TB is likely underreported.

Results

LISA analysis showed high levels of spatial clustering of TB notification rates at different spatial scales. In line with existing evidence, CNR were associated with poverty ($\beta = -0.35; SE = 0.18$) and positively associated with testing efforts ($\beta = 0.08; SE = 0.009$). CNR were negatively associated with the proportion of bacteriologically confirmed TB cases ($\beta = -137.9 SE = 18.0$), which is indicative of low rates of clinical diagnosis. Comparing the observed with the predicted CNR, different areas in which observed notified cases were lower as compared to the predicted rates.

Discussion

Integrating various sources of geographically disaggregated health system and TB epidemiological data in GIS has proven to be a valuable tool for TB planners and policy makers to monitor and evaluate the performance of their program. Using public health data at low levels of spatial aggregation enables program managers to effectively allocate resources and to target interventions.
Elias Roro, Wollega university
Abstract Id: 288

**Determinants of Perinatal Mortality among cohorts of Pregnant Women in Three Districts of North Showa Oromia Region, Ethiopia: Population based nested case-control study.**

Co-authors: Elias Merdassa Roro-Wollega university ; Mitike Molla  Sisay-Addis Ababa University

**Background:** Despite the remarkable progress Ethiopia has made in reducing child mortality, perinatal deaths are still high. However, there is a paucity of data on this area as there is no vital registration in the country. Hence this study used a community based data which could provide more representative and reliable information.

**Objective:** To assess the determinants and causes of perinatal mortality among babies born from cohorts of pregnant women in three selected districts of North Showa Zone of Oromia Region, Ethiopia.

**Methods:** A community based nested case control study was conducted among 4438 cohorts of pregnant women. We followed the cohort from March 2011 to December 2012 in three districts of Oromia region Ethiopia until they gave birth. The World Health Organization verbal autopsy questionnaire for neonatal death was used to collect data. A binary logistic regression model was used to identify determinants of perinatal mortality. Causes of deaths were assigned by a pediatrician and neonatologist.

**Result:** A total of 219 newborns (73 cases and 146 controls) were included in this analysis. Perinatal mortality rate was 16.5 per 1000 total births. Mothers aged 35 years and above had a higher risk of losing their newborn babies to perinatal deaths than younger mothers [AOR 7.59, (95% CI, 1.91-30.10)]. Babies born from mothers who had history of neonatal deaths were more likely to die during perinatal period than their counterparts [AOR 5.42, (95% CI, 2.27-12.96)]. Preterm births had a higher risk of perinatal death than term babies [AOR 8.58, (95% CI, 2.27-32.38)]. Male babies were at higher risk than female babies [AOR 5.47, (95% CI, 2.50-11.99)]. Multiple birth babies had high chance to die within the perinatal period than singleton borne babies [AOR 3.59, (95% CI, 1.20-10.79)]. Home delivery [AOR 0.23, (95% CI, 0.08-0.67)] was found to reduce perinatal death. Asphyxia, sepsis and chorioamnionitis were among the leading causes of perinatal deaths.

**Conclusion:** This study reported a lower perinatal mortality rate. The main causes of perinatal death identified were often related to maternal factors there is still a need to focus on these interrelated issues for further intervention.
Moises Rosas-Febres, Facultad de Salud Pública y Administración, Universidad Peruana Cayetano Heredia, Lima, Perú.
Abstract Id: 3367

SALUD PARA TODOS: resultados de implementación de un modelo de atención primaria por el Seguro Integral de Salud, el principal seguro público de Perú.

Co-authors: Moises Ernesto Rosas-Febres-Facultad de Salud Pública y Administración, Universidad Peruana Cayetano Heredia, Lima, Perú.; José Rodolfo Garay-Urbe-Instituto de Investigación, Facultad de Medicina Humana, Universidad San Martín de Porres, Lima, Perú.

Motivación. En Perú, diversos grupos minoritarios reclaman acceso al sistema de salud, pero las limitaciones del sistema afectan a todos. La implementación de un sistema de atención primaria ha sido un objetivo elusivo en la historia sanitaria de Perú. En teoría, dicho sistema integral debe caracterizarse por mayor accesibilidad, coordinación, integralidad y continuidad, lo que además de generar mayor eficiencia, supondría mejor gobernanza.

Objetivo. Usando data administrativa y de la Encuesta Nacional de Hogares del Instituto Nacional de Estadística (INEI), reportamos resultados de un modelo piloto de atención primaria implementado en una región de Perú por el Seguro Integral de Salud.

Metodología. El ámbito elegido fue la región Lima Este, involucrando 104 establecimientos de salud, entre ellos, un gran hospital nacional, 4 hospitales menores y 99 centros y puestos de salud. La población objetivo fue cercana a 400 mil personas. Se modificó el mecanismo de pago, el modelo de atención, el modelo de control prestacional, y se les otorgó a los establecimientos mayor autonomía en el uso de sus recursos, incluyendo la administración colegiada de los fondos combinados (hospitalarios+primer nivel), a cambio de resultados concretos.

Resultados. Según los resultados de auditoría, las mejoras en los procesos operativos fueron dramáticas. Los pagos informales disminuyeron, y el porcentaje de asegurados que declararon haber recibido medicamentos y servicios gratis aumentó 40%, mientras que en las regiones “control” no se notaron cambios importantes. También hubo aumento importante en el porcentaje de asegurados que declararon que resolvieron el problema por el que consultaron, entre otros muchos indicadores positivos. La facturación asociada a la producción de servicios disminuyó casi 30% comparado con lo que se hubiese facturado con el modelo previo, pero interesantemente, la satisfacción pública y del prestador con el modelo implementado fue mayor.

Conclusión. Combinando y alineando los mecanismos de pago, el modelo de atención y el modelo de control prestacional, es posible implementar un modelo de atención primaria en el corto plazo, generando eficiencia y mayor satisfacción pública. La implementación nacional de este modelo está en camino, y casi todas las regiones del país ya han iniciado su aplicación desde el 1 de enero 2018.
Understanding nurses’ dual practice: a scoping review of what we know and what we still need to ask

Background: Mounting evidence suggests that holding multiple concurrent jobs in public and private (dual practice) is common among health workers in low- as well as high-income countries. Nurses are world's largest health professional workforce and a critical resource for achieving Universal Health Coverage. Nonetheless, little is known about nurses’ engagement with dual practice.

Methods: We conducted a scoping review of the literature on nurses’ dual practice with the objective of generating hypotheses on its nature and consequences, and define a research agenda on the phenomenon. The Arksey and O’Malley’s methodological steps were followed to develop the research questions, identify relevant studies, include/exclude studies, extract the data, and report the findings. PRISMA guidelines were additionally used to conduct the review and report on results.

Results: Of the initial 194 records identified, a total of 35 met the inclusion criteria for nurses' dual practice; the vast majority (65%) were peer-reviewed publications, followed by nursing magazine publications (19%), reports, and doctoral dissertations. Twenty publications focused on high-income countries, 16 on low- or middle-income ones, and two had a multi country perspective.

Although holding multiple jobs not always amounted to dual practice, several ways were found for public-sector nurses to engage concomitantly in public and private employments, in regulated as well as in informal, casual fashions. Some of these forms were reported as particularly prevalent, from over 50% in Australia, Canada and the UK, to 28% in South Africa. The opportunity to increase a meagre salary, but also a dissatisfaction with the main job and the flexibility offered by multiple job-holding arrangements were among the reported reasons for engaging in these practices.

Discussion and conclusions. Limited and mostly circumstantial evidence exists on nurses dual practice, with the few existing studies suggesting that the phenomenon is likely to be very common, and carry implications for health systems and nurses’ welfare worldwide. We offer an agenda for future research to consolidate the existing evidence and to further explore nurses’ motivation; without a better understanding of nurse dual practice, it will continue to be a largely “hidden” element in nursing workforce policy and practice, with an unclear impact on the delivery of care.
Resisting stigma and creating pathways to health: an ethnographic study in Delhi, India

Co-authors: Martha Ryan-University of Southern California; Devaki Nambiar-The George Institute for Global Health

Commercial sex workers in Delhi share challenges that other social groups face in availing health services. However, this group also faces unique disadvantages, including multilayered stigma related to occupation, residence, social and perceived disease status, a highly privatized and monetized urban health system that rarely is commensurate with their needs, and a host of intermediaries – madams, pimps, NGOs– that stand between them and health services.

While the HIV epidemic brought increased attention to sex workers, many interventions conceptualize sex workers as “target populations,” further increasing social stigma, and reinforcing a research bias focusing almost exclusively on their sexual health. This research seeks to identify strategies employed by sex workers not as “target populations” but as users of the health system for everyday health concerns like flu, injuries, and joint pain who must also navigate particular stigmas related to their work and location.

We undertook repeated interviews with eight sex workers, sixteen healthcare providers (allopathic and non-allopathic, in small clinics and large government hospitals), and eight NGO workers over a period of 7 months in Delhi, India, following approval from a local Institutional Review Board. Interviews were conducted in Hindi by a researcher with language training and a translator.

Autonomy to seek care (and participate in health research) was strongly influenced by the length of time in commercial sex work (the longer, the greater the autonomy). Brothel-based sex workers described efforts to navigate piece-meal efforts handled by government, NGO and private providers. The absence of comprehensive, free services within the stigmatized area of the red light district contributed to delayed treatment seeking. A major form of stigma observed was “territorial,” resulting in concealment not just of occupation but also residence of sex workers. While providers insisted that they did not stigmatize, their preoccupation with sex workers’ hygiene and sexual health reinscribed the construal by sex workers of their work as “dirty.” This in turn had implications both for their health-seeking, and their economic prospects as they aged.

This research, intended for health researchers and healthcare providers, revealed the need to acknowledge and address territorial stigma and advanced marginality that sex workers face, which at times is reinforced in attempts to provide health services to them. Further, stigma-reducing services must cater to the range of concerns that these subgroups may face across the life-course -- extending beyond sexually transmitted infections -- and spanning not just health but economic and emotional well-being.
Users and street level health workers perceptions and evaluations in the implementation of the Family Health Strategy/Brazil: Levels of identification as coefficients of policy legitimacy

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Background: Identification and legitimacy concepts in Social Sciences can be considered as critical relational/power concepts that can contribute to the production of contextualized evidences that aim to strengthen the implementation of health policies such as the Brazilian Family Health Strategy (FHS). They can be used to reveal how users and front liners effectively know/value and participate in the implementation and relates with the political(implementer/policymaking) level.

Objective and Method: To verify in what terms users and health workers (local managers and health teams) evaluate barriers/facilitators in the implementation of the FHS and, thus, are in different ways identified with and trusting the policy. What is the relationship between actors and their effective implementation and trust in the policy? Hypothesis: Actors’ high levels of identification with the policy, positively influences their participation and trust in the implementation, increasing policy legitimacy. We develop a political evaluation of the FHS, employing concepts from Social Sciences (identification, legitimacy) and Health Systems Research.

Questionnaires were applied to users (394) and street level professionals (139) in primary healthcare units (12) in Goiania-Brazil. Interviewees evaluated 4 groups of barriers/facilitators regarding the implementation of health services-FHS: knowledge/understanding (KNOW), organization (ORGAN), interactions between health team and unity-district members (INTER) and relationship with municipal implementer/policymaker (POLICY). Open and closed (scores: 0-10) answers (perceptions and evaluations) were classified as levels of identification (Low, Medium, High) expressing possibilities of effectively turning policy into practice. They were analytically interpreted as coefficients of policy legitimacy, associated with points in the rejection-acceptance continuum.

Results: The general level of identification (LI) of managers, doctors, nurses and community agents are kept at the Medium level (LI = 6.33). LIs are higher for local managers and users. Health teams (doctors, nurses, CHWs) hold a more critical and/or reflexive perceptions of the policy. Some of the LI sub-indicators oscillate between the medium and low levels associated with the CAORG and POLICY barriers. This is because the availability of equipment/supplies and medicines (CAORG), professional valorisation and proximity with implementers (POLICY) received lower scores/critical views.

Conclusion: The gap between formulators/implementers and users/front liners is greater for the CAORG and POLICY indicators. They consists deficits in trust and policy legitimacy. The implementation and legitimacy of the FHS could be enhanced through the adoption of new organizational and relational/communication measures between front liners and the implementer/policymakers. We recommend the adoption of strategies/measures: to improve the organizational capacity of the FHS, to increase de valorisation of health workers, to foster closer relationships between implementers/policymakers and front liners.
Elvis Safary, Medical Faculty, Heidelberg University; Mukikute, Tanzania
Abstract Id: 344

Towards a tuberculosis free Dar es Salaam with T3: Test, Treat, and Track: Early experiences.

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Background: The WHO estimated that 164 000 persons developed tuberculosis (TB) in Tanzania in 2015 but only 62 168 TB cases were reported in the country. This suggests that case detection is low and TB treatment coverage only around 37%. Increasing TB case finding in symptomatic patients attending health facilities is key in TB control. However, it is of little public health value if the cases detected cannot be treated effectively. Three non-profit organizations, APOPO, Mapambano ya Kifua Kikuu na Ukimwi Tanzania (MUKIKUTE), and Operation ASHA (OpASHA) together with government and private TB clinics in Temeke, Dar es Salaam, have recently initiated the collaborative project ‘Test, treat, and Track’ that combines activities targeted at increasing case detection with efforts in initiating TB treatment and improving treatment outcomes.

Method: The project targets to enroll 1 000 TB patients in the intensive phase and 540 TB patients in continuation phase of treatment in Temeke, where APOPO’s HeroRATs enhance TB case detection. Former TB patients from Mukikute and DOT Nurses from selected DOT centres in Temeke were trained on TB eCompliance technology that aimed at ensuring all diagnosed cases started and complied with TB medication. TB patients who declared their consent are registered by nurses (hospital-based care), or Mukikute community health care workers (home-based care). A digital health platform named eCompliance, developed by OpAsha and successfully implemented in India, Uganda and Cambodia, is used. It consists of a customized software that runs on tablet computers, incorruptible finger print verification for monitoring of drug intake, and the online platform eCompliance suite for monitoring and evaluation of performance indicators.

Results: In the first three months of operations, 488 TB patients have been successfully enrolled in the project by 8 nurses and 15 community health care workers that is screened for TB, confirmed and treatment initiated. The time for patient registration was 5-10 minutes and less during follow-up visits. The devices are well accepted by the patients and considered easy to handle; however, training and ongoing support is needed to solve technical challenges.

Discussion: In our presentation, we aim to present the digital health platform, share early experiences from its first implementation in an African country, and discuss its potential to improve treatment adherence rates and ultimately cure rates in Tanzania.

Conclusion: it is feasible to increase access and treatment adherence by 95% through the extended use of eCompliance technology.
Public Health expenditure and life expectancy in Iran: how equitable and well do we perform?

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Background: Providing affordable access to safe and high-quality health care services for entire population (so-called Universal Health Coverage: UHC), in an equitable and efficient manner, has become a priority for countries over the past decade. To do this, it will inevitably require governments spend their limited budgetary resources on this priority and also they improve the efficiency of their health system. During recent years, Iran has taken a series of initiatives to ensure UHC. However, it is unknown that to what extent the country has successfully performed fair and efficient to reach this goal. In order to gain perspective on this issue, we 1) examine whether or not there is disparity in public spending within the country 2) determine the ratio of useful health outcome to total public spending.

Methods: Two indicators, including General Government Health Expenditure (GGHE) per capita, (Purchasing Power Parity: PPP) and Life Expectancy (LF) at birth were selected. Afterward, using data sources including the national consensus and provincial health account, we analyzed provincial inequality in GGHE per capita and LF versus GGHE per capita in Iran (2011). Gini coefficient were used for measuring inequality.

Results: Our results show that while the GGHE per capita, (PPP) varied from 103$ to 829$, the distribution of public spending is equitable (Gini coefficient was 0.09). All provinces had the same ratio of LE to GGHE (ranging from 0.1 to 0.2), except one province which had better performance with the highest ratio (0.9).

Conclusion: Given these finding, it could be concluded that the Ministry of Health and Medical Education (MOH&ME) has a fair mechanism to allocate the governmental resources within the country. However, health system at provincial level is not efficient. Since efficiency is critical to sustainability, the country should undertake reforms and initiatives to address this issue. In this route, it is recommended that countries’ efforts made to improve the efficiency in their health systems is reviewed. Furthermore, it is suggested that a case-study research is done to find how the top ranked province in efficiency has performed.
Joseph Sambali – MOH, Tanzania; Ann Le Mare– Durham University, UK;

Chris Dunn– Durham University, UK

The research was carried out in North-western of Tanzania, impoverished rural population, very famous globally for hosting large influx of refugees following historic ethnic conflict in genocide in Rwanda and ethnic conflict in Burundi. The study aims to understand effects of refugees on health and well-being of local host population because there are very inadequate academic studies. Most literature focuses most on the health and needs of refugees. The study employed an ethnographic approach based on a sociocultural perspective. Focus groups and interviews were the main tools for data collection, and analysis was done inductively through development of key themes. Participants involved youth and adult men and women living within the local host community.

Results show that effects refugees to host populations were complex having both negative and positive effects. and diverse. The arrival of refugees had a significant impact on the lived experiences, livelihoods and wellbeing of the villagers, such as increase in environmental problems (deforestation, and contamination and destruction of water sources), food insecurity, high level of insecurity (armed robbery, assaults, sexual harassment, and theft), felling of medicinal plants, and strained social relationships. In some situations, some positive effects were experienced including new agricultural techniques, entrepreneurship skills and intermarriage. While there were both positive and negative effects, the host population did become more vulnerable and their concerns and problems were given less attention and perceived that their citizenship rights were transferred to refugees. Even government officials were very busy dealing with refugee issues. This situation caused many complaints, as the local villagers felt their problems were being ignored. Therefore, in humanitarian crisis the host population should also be given special attention especially in this SDG Era where we aim for universal health coverage and no one should be left behind.
Pushpita Samina, USAID Bangladesh
Abstract Id: 1553

Gaps in quality management system of private healthcare service delivery in Bangladesh

Co-authors: Pushpita Samina-USAID Bangladesh; Ariella Camera-USAID Bangladesh; Joby George-Save the Children

Economic growth in Bangladesh has led to improvements in the quality of life and increased demand for higher quality healthcare services. The public health sector has struggled to keep pace with this demand and people have turned to the private sector to fill the gap. According to Bangladesh Health Bulletin 2016 report there are 5,023 registered private hospitals and clinics whereas the total number of public facilities is 1,214. Recent data from the Bangladesh Maternal Mortality Survey 2016 shows that 29% of deliveries now occur in private facilities, whereas only 13% occur in government facilities. Further, 83% of total private facility deliveries are by caesarian section, whereas it is 35% in government facilities. Bangladesh Health Facility Survey 2014 shows that the overall readiness for normal delivery services is low. This data indicates an evident gap in the quality of healthcare in private facilities. This study analyzes the quality management system in private facilities in Bangladesh through a review of literature, policies, and current practices. We used six domains of quality interventions recommended by WHO to identify gaps in the existing system:

In the leadership domain, there are independent private clinics and practitioners’ associations, though it is not responsible for monitoring the quality of care. In the organization capacity domain, there is a government agency responsible for controlling the quality of care, though its limited resources affect its capacity to monitor quality. In the regulation and standards domain, standards and a 1982 government act on regulation do exist. However, the standards and regulation need revision, there is no hospital accreditation, and no reporting system of patient safety. In the patient engagement domain, patients are not engaged and there is limited awareness in patients about their right to involvement in decision making. In the information domain, the national Health Information System exists, but it has no private facility data. In terms of models of care, there are a few facilities which have good quality assurance systems, but they are mostly high-end hospital facilities.

Overall, there is an evident gap in market regulation and quality of care monitoring in private health sector of Bangladesh. The recent step towards digitalization of licensing and initiation of health facility accreditation are commendable, but a stronger approach to overall quality management is necessary. Creating greater accountability, a culture of patient safety, and strong leadership will be necessary to improving the quality of care in Bangladesh.
A multi-level approach to ensuring that adolescent mental health and psychosocial wellbeing is ‘not left behind’: the case of Vietnam

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Background: The inclusion of mental health and wellbeing is a much-awaited addition to the SDGs targets. However, without a concerted multi-level and multi-sectoral effort to address mental health and psychosocial wellbeing, progress will not be achieved. This paper explores how progress might be achieved using Vietnam as a case study. Over the past 40 years Vietnam has transitioned from a socialist to a market economy, experiencing rapid economic growth and large declines in poverty. This economic transformation has resulted in increasing pressure on individuals and families also giving rise to mental health problems and psychosocial distress in a country largely unprepared to deal with such burdens. The neglect of such issues is highlighted particularly for adolescents and for those living in remote/rural areas. Using an adapted socio-ecological model, this paper synthesises findings from a study which explored drivers of and responses to mental health and psychosocial wellbeing in rural, peri-urban and urban settings in northern and southern Vietnam.

Methods: The study combined primary qualitative data methods with literature reviews. 210 adult, adolescent, community and service provider respondents across 6 sites were interviewed using in-depth and key informant interviews and focus group discussions; 410 school children also completed 2 internationally validated wellbeing scales. With appropriate consent, interviews were recorded, translated, transcribed and coded using Maxdqa.

Results: Individual-level mental health risk factors include: self-isolation, addictive online behaviours, negative perceptions about physical appearance. Household level risk factors include: overly restrictive household rules, poor household socio-economic status, intra-household tensions. School-level risk factors include: academic stress, peer pressure, inadequate support in the school environment. Community level risk factors include: harmful social norms (early marriage), limited economic opportunities, easy access to harmful substances. Protective factors exist at different levels and include leisure activities, role models, social networks, supportive family members and teachers. Examples of effective responses across sectors also exist - school psychosocial counselling units, social welfare/protection centres, telephone hotlines and community mental health programmes.

Conclusions: Despite some progress, responses remain limited: they are not scaled-up and are under-resourced; they largely focus on severe mental health disorders; they are neither age nor gender-appropriate/sensitive; they lack social workers and psychologists; they are concentrated in urban centres; and they do not consider the multi-level and multi-sectoral nature of mental ill-health and psychosocial distress. All these factors need to be considered to ensure that adolescent mental ill-health and psychosocial distress is addressed in an appropriate, holistic and equitable manner.
Integration of HIV testing and HIV care services: Implications for linkage to HIV care in hard-to-reach and rural settings, Mbeya-Tanzania. A mixed methods cohort study

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Background

HIV testing and linkage to care are both crucial steps along the HIV continuum of care for successful management of HIV/AIDS. Non-availability of HIV care at testing sites impedes timely linkage to care and treatment initiation. Mobile and outreach testing have increased testing rates in Tanzania. However, only 21.7% (n=68) of 312 sites providing HIV Counseling and Testing services in Mbeya offer HIV care services, and no mobile sites offer treatment. This study of newly HIV diagnosed individuals testing at facility-based and mobile/outreach testing sites in remote and hard-to-reach areas of Mbeya region, Tanzania describes the implications for lack of integration in HIV testing and care service to successful linkage into HIV care after testing HIV positive in Mbeya region.

Methods

An explanatory sequential mixed method study based on a prospective 2-armed cohort of 1,012 newly HIV diagnosed individuals who tested either at facility-based or mobile/outreach HIV testing sites (n=16) in remote areas of Mbeya was conducted between August 2014 and July 2015. Participants were followed for six months to gather information on linkage to care and ART initiation. In the study's qualitative component, eight focus group discussions and ten in-depth interviews were conducted with purposively selected newly HIV-diagnosed individuals, and twenty individual interviews were conducted with health-care providers in the study sites. Quantitative data were analyzed using Stata Version 13, while qualitative data were analyzed by thematic content analysis, supported by Atlas.ti Software.

Results

At six months since diagnosis, 78% (793 out of 1012) of participants enrolled in the cohort had linked into care. Respondents reported higher satisfaction with quality of care at mobile sites. However, linkage to care was significantly higher in the facility-based testing arm at 84% (CI= 81%-87%), compared to 69% (CI= 65% -74%) of individuals tested at mobile/outreach sites in the same period. Individuals who reported that they tested because they wanted to get treatment for HIV were 25% more likely to link to care (p=0.005). The study identified factors impeding linkage to care at patient, provider, health system and contextual levels, however health system organizational factors, notably availability of on-site HIV care services and well-functioning routine procedures were particularly prominent.

Conclusion

Accessibility of HIV care services is minimal in the remote, hard to reach populations in Mbeya region. Integration of HIV testing and HIV care services in the same location is of particular importance in facilitating successful linkage to care.
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Abstract Id: 4024

Global Health, Aid Politics and International Activism-Effective Altruism or Utilitarian/Reciprocal Altruism? Dissecting Ontologies of Engagements in an Age of Globality

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Past three decades have seen unparalleled enthusiasm, unwavering commitment, and profound engagement by international stakeholders in ‘bettering’ the ‘others’. Most of these acts of heightened prosociality incite themes of a globalized world order building on values of selflessness, and caring and sharing. In fact, an overall commitment to ‘achievement of universal health for all’ in the age of ‘global health’ and ‘globality’ does reflect protracted sensitivity and efforts by stakeholders at large. However, a nuanced observation and insider’s perspective portrays a different picture, especially with regard to capital investment, and involvement, and its potential ability to dilute the nature of and meanings associated with one’s engagement. Tainted images of High rise buildings siphoned with million dollar salaried executives sitting at a top New York Office, or visiting ‘Developmental Specialists in impoverished Africa does make many eyebrows raised, and create grounds for contestations and pluralities of perspectives on ‘aid politics’. Although, the commitment of donor organizations, multilateral agencies and excellent initiatives, and grand scale of operationality can never be questioned, stakeholder motives need examination concerning ‘authentic commitment’, and ‘altruism’.

In this context, based on a reflexive, hermeneutical and didactic engagement with the key processes, indices and stakeholders associated with Global Health Financing, or what’s more recently came to be known as ‘Developmental Assistance for Health’, the paper makes a sincere attempt to probe into the theorization and ontological moorings on global health financing, initiatives, and engagements, and how do they influence each other. Few questions which the paper attempts to analyzes and synthesize using deep reflexive insights from multiple stakeholders worldwide are: i) How do we visualize and contextualize ‘key engagements’, and rootedness of those engagements by digging the deeper layers of ‘altruistic consciousness’, and ‘moral conscience’; ii) Can a globalized effort at passionate engagement in aid-politics be truly considered a symbolic reflection of ‘effective altruism’, or it will be more pragmatic to assess its rootedness in a ‘utilitarian/reciprocal altruism’, as the broad transdisciplinary literature on ‘altruism’ comes to apprehend?; iii) Looking at Aid Politics, what voices, and unique concerns do nations (and its stakeholders) of global south share, and echo?; iv) How do we build on strengths and weaknesses in a concept, and notion of ‘reciprocal altruism’, and infuse the same to transform our collective consciousness, and engagement in the age of ‘globality’ beyond mental borders, although new stringent geo-political borders keep limiting us in our contested geographies each moment?
Who sets the agenda? The U.S. Government "Global Gag Rule" and health service provision and advocacy in selected countries

Co-authors: Marta Schaaf-Department of Population and Family Health, Columbia University Mailman School of Public Health; Emily Maistrellis-Department of Population and Family Health, Columbia University Mailman School of Public Health

Global health discourse is nearly unanimous and its calls for civil society engagement in health service delivery and planning, yet the actual space for such engagement is influenced by political, social, and cultural dynamics at the national and global levels. The policies of one major donor, the U.S. government, merit examination. Following the inauguration of the President in January, 2017, the United States (U.S.) government instated a policy called "Protecting Life in Global Health Assistance," which is widely known as the "Global Gag Rule." This policy prohibits the allocation of U.S. global health assistance funding to foreign nongovernmental organizations unless they certify that they will not provide abortions in cases other than those involving a threat to the life of the woman, rape, or incest; provide counseling or referral for abortion; or lobby for abortion law liberalization in their countries.

Through this policy, the U.S. government affects the civic space in other countries. This comes at a time when civic space is tightening in many countries (Carothers, 2015; Joshi & Mattingly, 2015). Tightening civic space is regularly discussed in global fora regarding governance and transparency, but it is comparatively under addressed in global health fora. Moreover, recent discussions have highlighted the power of international donors in setting the agenda regarding health priorities (e.g. Shiffman, 2014; Storeng, 2014), but these discussions have generally not addressed the role that international donors can play in shaping civil society space in recipient countries.

This oral presentation will present preliminary results from a multi-country, mixed-methods study of the GGR. By October, 2018, we will have preliminary data regarding the impact of the GGR on access to family planning in Kenya, Nepal, and Madagascar, as well as the impact on local NGO ability to refer patients to a range of services, including counseling and support for gender-based violence. Based on our analysis of the flows of U.S. government money and past experiences where non-U.S. organizations over-interpreted the GGR out of a desire to maintain U.S. financial support, we believe that the impact may be significant in some contexts. We will also present preliminary data on how this policy has affected funding and reproductive health ecologies at national and global level, including some efforts to replace U.S. funding or to support policy resilience in countries, such that they are less impacted by the vagaries of U.S. policy.
Hospital acquired dengue can cripple health care systems in middle of outbreak: Time to think of a management strategy

Co-authors: Lalith Senarathna-Rajarata University of Sri Lanka; Sameera Hewage-Regional Director of Health Services Office, Kandy, Sri Lanka; Jayawardene Rathnayake-District General Hospital, Rathnapura, Sri Lanka; Indika Gawarammana-University of Peradeniya, Sri Lanka

Purpose: The global incidences of dengue have grown dramatically in recent years. In 2017 in Sri Lanka, there were approximately 190,000 suspected dengue cases. All major hospitals in Sri Lanka were overburden during this outbreak. These hospitals, situated in urban areas with high mosquito density and dengue patients were treated in open wards. Mosquito nets were used for individual patients but this was not practically effective when there were more patients than beds. This resulted larger number of staff from all categories became infected and the severity of the issue has crippled hospital services. Extra staff and military were called in to support routing work. Similar to health care team, hospital acquired dengue is a problem to patients hospitalized with other conditions and bystanders as well. The purpose of this presentation is to discuss strategies to control hospital acquired dengue fever in Sri Lankan settings with a view of expanding in to counties in the region.

Focus/Content: Currently, there is no solid mechanism to control hospital acquired dengue. Hospital wards in Sri Lanka are mainly open and opportunity for mosquito contact is high and should be prevented. Controlling mosquito density by destroying breeding sites and fumigation are the current approaches but showed less effect during recent outbreaks. Mosquito nets are available in hospitals for individual patients, but it has limited use in an outbreak. Redesigning and converting available open hospital wards to be mosquito proof using netting will be useful. Developing hospital management plans on resource allocation, admissions, referral systems to minimize hospital bypass and staff placements to cater for mild to severe outbreaks is an urgent need. Such a system will be useful to minimize hospital acquired cases and to continue hospital functioning without disruptions.

Significance: Hospital acquired dengue among staff and other patients during outbreaks are not in focus of health care planning. Such infections can have huge impact in health care systems as the effected staff members may take weeks to get back in to their roles in the institute. This can be significant in resource poor settings when there is an outbreak. Hence the need of specific management plan is high. It will ensure the health system preparedness and most importantly the health care system is not crippled by the diseases is has to be treated.

Target Audience: health system researchers, clinicians, administrators, health care managers and health care policy makers
Community-based health service among indigenous community in Palu, Indonesia

Co-authors: Agus Setiawan-Faculty of Nursing, Universitas Indonesia; Yodi Christiani-Credos Institute, Jakarta

Background: Community-based health service is a potential strategy in increasing access to care. Nevertheless, providing health service for specific group of population may be challenging. Among other programs, Integrated Health Post for Maternal and Child Health (IHP) has been implemented in Indonesia since 1975. However, evidence related to its implementation in indigenous community is lacking.

Objective: To explore the implementation of community-based health service for the indigenous community in Palu, Indonesia.

Method: A qualitative study was conducted in Ulujadi, a sub-district in Palu, resided by the indigenous community. Data were collected through Focus Group Discussion involving caregivers, Community Health Workers, and village midwives – each group was participated by 5 to 8 participants. Further, interviews were also conducted to village leaders, head of community health centre (CHC), IHP’s coordinator at CHC, and Palu health office. FGDs and interviews were transcribed and thematic analysis were performed using the annotated transcripts.

Results: IHP has been implemented to provide health service for indigenous community in Palu, with most activities focused on child health. Main activities include weight and height monitoring, immunization, vitamin A supplementation, and supplementary meals provision. Lack of community’s interest to participate, insufficient operational funding and infrastructures were identified as main problems in IHP’s implementation. Further, cultural and language barriers often added the complexity in promoting health behaviour, including in infant and young children feeding practice, and care for child illness. Rapport between health workers and the community is indicated as an essential factor in delivering effective community-based health service among the indigenous group.

Conclusion: There are specific challenges and barriers faced by the health workers in delivering community-based health service for indigenous population. Acknowledging this condition, a comprehensive understanding on the local context is important to develop a tailor-made strategy in health program delivery. Further, the capacity of health workers serving the community should also be strengthened, not only focusing on medical service provision, but also on health promotion delivery and communication skills.
Relation of knowledge levels and lifestyle factors with Blood pressure profiles of school going adolescents (13-15 yrs)

Co-authors: Sonika Sharma-Lady Irwin College, Department of Food and Nutrition, Delhi University; Neena Bhatia-Lady Irwin College, Department of Food and Nutrition, Delhi University; Swati Jain-Lady Irwin College, Department of Food and Nutrition, Delhi University

Background: Hypertension in children and adolescents is emerging as a public health problem. It is believed that hypertension and prehypertension in childhood, commonly leads to adult hypertension. During adolescence, teenagers make individual choices and develop personal life styles. There is a need to observe the prevalence of these lifestyle-associated risk factors so as to plan intervention measures accordingly. The present study was designed to identify the association of blood pressure of normotensive, hypotensive and hypertensive individuals with their knowledge levels (nutritional and blood pressure related) and lifestyle factors (physical activity levels, sleep pattern, stress levels, smoking and alcohol consumption).

Methods: Adolescents, aged 13-15 yrs (N=500), from a public school in East Delhi, India were screened for blood pressure. Normotensive, hypotensive and hypertensive individuals (n=20 each) were administered a knowledge and lifestyle assessment questionnaire.

Results: The results showed, that although all the three groups had suboptimal physical activity levels (RAPA-1 Scores- below 5), normotensive adolescents scored the highest among them. Sleep pattern was also similar, with 35-40% individuals sleeping 6 hours or less per day. No significant difference was observed in the stress scores between the three groups. Consumption of alcohol and smoking in the past 30 days was reported by very few (2 normotensive, 1 hypertensive and 1 hypotensive adolescents out of 60 claimed alcohol consumption; 2 hypotensive adolescents claimed smoking). Interestingly, hypertensive adolescents were the most knowledgeable group of individuals regarding diet, lifestyle and blood pressure.

Conclusions: The findings clearly display the role of physical inactivity, sedentary behavior in development of hypertension, independent of knowledge levels about the disease. The present data supports the evidence that there is loss of sleep through adolescence, which could later in life, create a myriad of negative consequences. This indicates a need for counseling on lifestyle factors for adolescents.
Impact of the Nigerian Urban Reproductive Health Initiative and Health Facility Characteristics on Family Planning and Child Immunization Integration in Urban Areas of Nigeria

Co-authors: Kate Sheahan - University of North Carolina at Chapel Hill; Jen Orgill-Franklin and Marshall College; Ilene Speizer - University of North Carolina at Chapel Hill; John Paul - University of North Carolina at Chapel Hill; Antonia Bennett - University of North Carolina at Chapel Hill; Morris Weinberger - University of North Carolina at Chapel Hill

Introduction: Integrating family planning into child immunization services has potential to satisfy unmet need for postpartum contraception, and to contribute to reduction of maternal and infant morbidity and mortality. However, more evidence is required to determine whether and how to invest in this approach. Most research measures facility-level integration as binary and static - either a facility is integrated or not. In reality, extent of integration varies across time and place. Few studies examine associations between facility-level characteristics and extent of integration. This study: 1) determines whether facility-level integration changes over time 2) assesses the impact of the Nigerian Urban Reproductive Health Initiative (NURHI) on integration, and 3) identifies determinants of integration across six urban areas of Nigeria.

Methods: This study leverages longitudinal health facility survey data (baseline N= 400, endline N= 385). Intervention facilities received NURHI while comparison facilities did not. NURHI’s primary objective was to increase contraceptive use; the program also aimed to increase integration. Outcome measures include facility-level a) Provider Integration Index and b) Physical Integration Index scores. Independent variables include a) whether the facility received the NURHI intervention and b) facility-level characteristics: facility ownership, level (primary health center or hospital), family planning client load, location, proportion of providers who have received in-service training in modern family planning methods, and providers’ average number of years of experience. Differences-in-differences models determine whether facility-level integration changes over time, assess NURHI’s impact, and identify determinants of Provider and Physical Integration Index scores.

Results: Results show that: 1) Provider Integration Index scores increase significantly among comparison facilities while Physical Integration Index scores do not increase significantly in the intervention or the comparison group; 2) NURHI did not have a significant effect on Provider or Physical Integration Index scores; however, family planning client load increased significantly in NURHI facilities 3) the following characteristics are determinants of both Provider and Physical Integration Index scores: public ownership, providers’ average years of experience, proportion of providers who received in-service training in family planning methods, and location. Time and family planning client load were determinants of Provider Integration Index scores.

Discussion & Conclusion: Programs seeking to increase integration should provide targeted monitoring and support as increasing client load may compromise capacity to integrate. To develop sustainable and scalable integration initiatives, policy makers and programmers need to understand determinants of integration. Research is needed to ascertain whether extent of integration is associated with service delivery and health outcomes.
Zewdneh Shewamene, Western Sydney University, Australia
Abstract Id: 1204

Acculturation and use of traditional health practices among African migrant women in Australia: A mixed method study

Co-authors: Zewdneh Shewamene-Western Sydney University, Australia; Tinashe Dune-Western Sydney University, Australia; Caroline A. Smith-Western Sydney University, Australia

Background: People may maintain or change their opinions, views or perceptions about certain issues such as traditional medicine as they move to a different socio-economic and cultural environment. More than 80% of the population in African use traditional medicine as a first line of health care. The purpose of this study was to investigate if and how African-born women continue their cultural health practices and beliefs following resettlement in Australia.

Method: This paper reports the influence of acculturation on use of traditional medicine, and is part of a broader mixed method study investigating if and how cultural health practices are maintained among African migrant women in Australia. The study uses methodological complementarity of a sequential mixed-method design which involved a cross-sectional survey (n=319) and individual interviews (n=15).

Result: Both the survey and the interview data indicated that traditional medicine is retained as an important form of health care for African migrant women in Australia. Nearly 73% of the survey participants reported using some form of traditional therapies for maternal wellbeing. Most of the interview participants indicated that they continued practicing traditional therapies to keep their African culture alive and some considered traditional medicine as an identity or belonging to their community. Migrating to Australia after the age of twenty (OR, 3.0; 95%CI, 1.54-5.33; p<0.001), staying in Australia for less than five years (OR, 3.1; 95%CI; 1.4-6.68; p=0.004), and low English language fluency (OR, 5.6; 95%CI, 2.58-12.11; p<0.001) were distinctive acculturation factors associated with the use of traditional medicine among African-born women in Australia.

Conclusion: Our finding indicates that traditional medicine is retained as an important form of health care among African-born women in Australia. This was particularly important for women who arrived in Australia more recently, after the age of twenty, and with low English language knowledge. It is important to consider such cultural health practices and beliefs when providing health services for African migrant women to help improve health outcomes.
Husband’s involvement in birth preparedness and complication readiness: a study among urban slum residents of Mangaluru, India

Co-authors: Siddharudha Shivalli - Yenepoya Medical College, Yenepoya University, Mangaluru-575018, India; Ramya Murugesh - Yenepoya Medical College, Yenepoya University, Mangaluru-575018, India; Anusha Narayanswamy - Yenepoya Medical College, Yenepoya University, Mangaluru-575018, India

Background: Birth preparedness and complication readiness (BPCR) is a programmatic approach to enhance the use and effectiveness of maternal and newborn health services. BPCR should be a key component of focused antenatal care to reduce maternal and neonatal mortality in low-resource settings. In India, healthcare workers (auxiliary nurse midwife and ASHA, Accredited Social Health Activist) implement BPCR at the grass root level under RMNCH+A (reproductive, maternal, newborn, child, and adolescent health) approach. In developing countries, men are the key decision-makers and determine women’s access to healthcare. Male involvement in ante and postnatal care is associated with improved maternal health outcomes. A substantial proportion of women in Mangaluru, a coastal city in India, experienced pregnancy (53.7%), childbirth (45.6%), and postnatal (11.1%) complications in their last delivery despite 98.3% institutional deliveries. One of the reasons could be suboptimal implementation of BPCR.

Objective: To assess the husband’s involvement in BPCR and the key factors associated in urban slums of Mangaluru, Karnataka, India

Methods: A community-based cross-sectional study was conducted on 207 randomly selected husbands from 21 urban slums of Mangaluru, India from April-Sept, 2016. Multistage sampling was followed to select husbands with a child aged <1year. Husband’s involvement in BPCR was elicited by a semi-structured interview schedule. BPCR included information on six key components: planned four ANC visits for wife, identified the place of delivery, saved money for expenses, mode of transport identified, identified the birth companion and arranged a blood donor. BPCR involvement was considered as optimal if minimum four out of six key components were followed. Chi-square test and logistic regression were used for analysis. Proportion (95% confidence interval, CI) and adjusted Odds ratio (adjOR) of optimal involvement in BPCR were the key outcome measures.

Results: Half of the husbands (n=104, 50.2%, 95% CI:43.3-57.2%) displayed optimal involvement in BPCR. On regression analysis, husband’s literacy status of >10th standard (AdjOR:3.3, 95% CI:1.33-8.3), awareness of minimum two key danger signs (AdjOR:2.2, 95% CI:1.03-4.5) and receiving adequate information about BPCR (AdjOR:28.8, 95% CI: 8.2-100.9) were associated with optimal BPCR involvement.

Conclusion: Study findings suggest fine-tuning of ongoing maternal and child health interventions under RMCH+A strategy. Grass root level healthcare workers should encourage husbands to accompany wife for antenatal care. Husbands should be involved while explaining key danger signs and various components of BPCR. A special emphasis on husbands with lower literacy is needed in the study area.
Pregnancy and Tobacco: Awareness, Perceptions, and Usage among Married People in Rural Areas

Co-authors: Kyaw Lwin Show-Department of Medical Research; Aung Pyae Phyo-Department of Medical Research; Saw Saw-Department of Medical Research; Ko Ko Zaw-University of Public Health, Yangon; Thuzar Chit Tin-Department of Public Health; Nyein Aye Tun-Department of Public Health; Khin Thet Wai-Department of Medical Research

Worldwide, tobacco use is the major public health concern, and during pregnancy, it is recognized as the most important modifiable risk factor to prevent pregnancy complications and fetal outcomes. This study aims to explore the awareness of miscarriages and fetal outcomes (low birth weight, preterm, stillbirth, birth defects) due to tobacco use, perceptions and practices among married men and women of rural areas. This cross-sectional study was conducted in 32 villages of Kyaunggon and Lemyethna Townships in Ayeyawady Region, Myanmar. The trained interviewers administered a pre-tested structured questionnaire during face-to-face interviews with currently married men (n=301) and married women (n=316) per selected household. Nearly 90% (553/617) of the respondents reported at least one family member using tobacco that is a smoker and/or using smokeless tobacco. The respondents who could answer at least one adverse effect of tobacco use on miscarriages and fetal outcomes were 45% for smoking and <40% for second-hand tobacco smoke and smokeless tobacco.

Multivariate analysis revealed higher odds in awareness of adverse effects due to smoking only among women compared to men (aOR=2.9; 95%CI=2.1-4.3), and among those with higher level of formal education compared to those with low education level (aOR=1.7; 95%CI=1.2-2.5). Around 65% to 86% of married men and 71% to 90% of married women expressed perceived risks of smoking on miscarriages and fetal outcomes. Around 60% to 80% of married men and married women had perceived risks of second-hand smoke on miscarriages and fetal outcomes. Moreover, between 53% and 73% of married women perceived the risks on miscarriages and fetal outcomes when they used smokeless tobacco. One in five respondents was a current smoker and cheroot was the major type. Smoking practice was significantly common among married men (aOR=12.9, 95%CI=6.5-25.8) and who lacked awareness on the risk of smoking (aOR=1.94, 95%CI=1.2-3.1). A majority of current smokers (85.2%) smoked at home and 16.4% reported that there was a pregnant woman in their smoking area. Nearly half of the respondents were currently using smokeless tobacco and it was significant in married males (aOR=8, 95%CI=5.3-12.1). Awareness of the potential risk of smoking, passive smoking and smokeless tobacco on maternal and newborn health is not up to satisfactory level among married people of rural areas. This study highlighted to develop behavior change intervention to reduce smoking practice especially for married men in order to prevent unfavorable fetal outcomes due to second-hand smoke exposure.
THE ROLE OF GENERAL PRACTITIONERS DURING ECONOMIC CRISIS

OBJECTIVES:
The 2008 financial crisis raised concerns over the probability of the rise in death, illness, and disability in European OECD countries, with increased 'Unmet needs for medical examination' from 3.1 to 3.4 percent between 2008-2012. As the concave relationship between income and health gradually flattens out with lowered effectiveness for an additional dollar of income, improving health on a decreasing scale, finding measures to address increasing unmet health needs is pivotal. This study aims to investigate whether the General Practitioners (GPs), as healthcare service providers, can mitigate the impacts of economic crisis on health outcomes.

METHODS:
The data for 20 high-income European OECD countries (2006 – 2013), extracted from Eurostat, were analyzed using panel data analysis, and the variables for different cross-sections over a time span were observed using random effects and fixed effects model(s). F-test, calculated using R2 values adjusted for a number of covariates in different models, was used to test the nested models and results were analyzed using Stata\textregistered\textsuperscript{v11}.

RESULTS:
The long-term unemployment, resulting from the crisis, is significantly associated, strongly and positively, with 'Unmet needs for medical examination' for all levels of income (p<0.05 to p<0.01). The supply of an additional GP per 1,000 population reduces the unmet health needs, but gradually decreasing, from 0.27, 0.22, 0.15 percent across the 1st, 2nd and 3rd income quintiles to 0.18, 0.12 and 0.12 percent, respectively. But this doesn't hold true for the 4th income quintile.

CONCLUSION:
During economic crises, the supply of GPs can mitigate the adverse effects of long-term unemployment, but for the lower income people only. However, such mitigating effects diminished with increasing income and had no significance for the highest income population. The presence of GPs significantly contributes in controlling the access to tertiary care, by addressing the health issues at primary level.
Som Shrestha, Save the Children

Abstract Id: 1868

**Association between perception of intimate partner violence and reproductive health care service utilization among women of reproductive age in South Asian region.**

Co-authors: Som Kumar Shrestha-Save the Children; Subash Thapa-Texas A&M University; Binaya Chalise-Nepal Health Research Council (NHRC), Kathmandu; Don Vicendese-Cancer Council Victoria, Melbourne; Bircan Erbas-La Trobe University, Melbourne

Introduction:

Intimate partner violence (IPV) negatively affects women’s reproductive health outcomes, however, little is known about the link between women’s perception of IPV and reproductive health care service utilization. This study aims to find the association between women’s perception on justified wife beating and reproductive health service utilization in South Asian region.

Methodology:

The study analysed nationally representative cross-sectional samples of multiple indicator cluster surveys (MICS) of Nepal, Afghanistan, Bhutan and Pakistan (Punjab and Sindh provinces) conducted between 2010 to 2014. A total of 26,029 reproductive women were included in this study who had pregnancy outcomes within last 2 years.

Logistic regression with random effect allowing clustering at the country level was used to find the association after controlling for potential confounders. We fitted linear regression model to determine mean increase in timing of first Antenatal Care (ANC) visit associated with justified wife beating. In addition, likelihood ratio test was used to investigate trend of reproductive health care service utilization associated with increasing levels of justified wife beating.

Results:

Among total respondents, about 33.4% women were currently using family planning methods. Similarly, 78.9% women had at-least one ANC visit, 43.7% reported having four or more ANC visits, 56.1% had institutional delivery and 77.9% had taken post-natal care (PNC) services during their last child birth. Almost 58.8% women reported wife beating is justified for at-least one cause if wife goes out without telling husband, neglects children, argues with husband, refuses sex or burn food.

Women who justified wife beating from their partners were less likely to use family planning methods (OR=0.92, 95%CI: 0.86, 0.97), access ANC service (OR=0.88, 95%CI: 0.82, 0.96), complete four or more ANC visits (OR=0.82, 95%CI: 0.77, 0.87) and have institutional delivery at health facilities (OR=0.93, 95%CI: 0.88, 0.99).

In addition, women who justified wife beating delayed accessing first ANC service by almost 0.49 months (95%CI: 0.24, 0.75) compared to their relative counterparts. We found decreasing linear trend for using family planning methods, four or more ANC visits and institutional delivery associated with increasing level of justified wife beating.

Conclusion:

This study showed that women’s perceived justification of wife beating by their immediate partners was associated with decreased likelihood of using reproductive health care services. The further study is needed to determine the factors and the pathways that lead to poor reproductive health outcomes among reproductive aged women in South Asian region.
Decomposing Inequality in Catastrophic Healthcare Expenditure for Hypertension Household in Urban Shaanxi, China from 2008 to 2013

Co-authors: Yafei Si·Xi'an Jiaotong University; Min Su·Xi'an Jiaotong University; Zhongliang Zhou·Xi'an Jiaotong University

Background

Hypertension is an important worldwide public-health challenge. Significantly associated with healthcare expenditure, the prevalence of hypertension has ranked first among all non-communicable diseases (NCDs) in urban China. Despite the latest wave of China's health care reform initiated in 2009 has achieved unprecedented progress in rural areas, little is known for specific vulnerable groups' catastrophic healthcare expenditure (CHE) in urban China. This study aims to estimate the number of hypertension households (households with one or more than one hypertension patient) incurring CHE and its income-related inequality in urban Shaanxi, China from 2008 to 2013.

Methods

Based on 4th and the 5th National Household Health Service Surveys of Shaanxi, we identified 705 and 1289 households with hypertension in 2008 and 2013 respectively for our analysis. Considering the complications of hypertension, we classified hypertension households into two groups, Simplex households (with hypertension only) and Mixed households (with hypertension plus other NCDs). CHE would be identified if out-of-pocket healthcare expenditure was equal to or higher than 40% of non-food household expenditure. Concentration Index (CI) and its decomposition based on the Probit regression were employed to measure the income-related inequality of CHE.

Results

We find that CHE occurred in 11.24% of the Simplex households and 22.12% of the Mixed households in 2008, and 21.49% of the Simplex households and the 46.89% of Mixed households incurred CHE in 2013. Furthermore, there were strong pro-poor inequalities in CHE in the Simplex households (CI: -0.2787 and -0.2825) and Mixed households (CI: -0.3616 and -0.2616) both in 2008 and 2013. The majority of observed inequalities in CHE could be explained by household economic status, house head's health status, and having elderly members.

Conclusion

We find a sharp increase of CHE occurrence and the sustained strong pro-poor inequalities for hypertension households in urban Shaanxi, China from 2008 to 2013. Improvement of health service availability is critical to improve residents' health in low-and-middle income countries, but this could result in more households incurring CHE, especially for the vulnerable ones. Thus risk protection policies and health systems reform would be especially important in such a situation. Based on our findings, we argue that the latest wave of China's health care reform initiated in 2009 have limited effect in urban areas. The current health system is insufficient to sustain universal healthcare coverage, and better financial risk protection for the vulnerable ones in urban China should be developed, especially for the hypertension households.
How do drivers for policy engagement affect the potential for academia to influence policy and practice? Implications for multisectoral action on health systems policy

Background: Multisectoral collaboration between academic and policymaking institutions accounts for a substantial share of knowledge translation activities. Although recent studies have focused on facilitators and barriers to engagement, there has been limited research characterizing the drivers of such engagement and how they can be leveraged, enhanced and adapted. Furthermore, in-depth analysis of the diversity and strength of engagement strategies between academic and policy actors is wanting. The purpose of this study was to explore academic researchers’ reasons and methods of engagement with decision-makers at multiple levels of government. Methods: We conducted a sociometric survey of academic faculty within a large school of public health (SPH) and asked faculty to identify individual relationships with decision-makers at city, state, federal, and global levels. For each relationship, we asked faculty to select reasons, frequency, and duration of engagement from a list of options. We also explored how the relationships were initially formed. Bivariate analysis and logistic regression using STATA were employed to determine whether engagement drivers differed by faculty characteristics. Results: Two hundred and eleven full-time faculty (32%) participated in the survey. Respondents spanned all SPH departments and comprised faculty in junior, senior, and leadership positions. The five most prevalent drivers for engagement reported were: technical assistance, project collaboration, research dissemination, strategic engagement, and learning policy processes. Few respondents reported engagement related to training activities and direct advocacy. The prioritization and frequency of these drivers differed by level of government, with relationships at the federal and global level focusing most on project collaboration and technical assistance. Faculty characteristics related to position, career track, and areas of expertise were found to be statistically significantly associated with certain drivers (p<.05); for example, engaging to share research results was associated with faculty with expertise in health policy research (p=.009). Discussion: Multisectoral engagement between academic faculty and policy decision-makers spans multiple activities and varies slightly across levels of government. Faculty in certain career tracks, positions, and health domains may be more inclined to engage with decision-makers for many reasons – some of which may complement each other. This study has implications for academic faculty, SPHs, and health system policymakers. Structures and processes that promote research utilization in policy and practice should consider how drivers of engagement relate and how best to leverage them to facilitate multisectoral collaboration. This is particularly important as government agencies look to academia to help facilitate multiagency goals for research that impact health.
Junaid-ur-Rehman Siddiqui, Marie Stopes Society
Abstract Id: 2688

Development of an Empirical Scale to Assess Clients’ Perceptions of Quality of Family Planning Services: Structural Equation Modelling Approach

Co-authors: Junaid-ur-Rehman Siddiqui-Marie Stopes Society; Xaher Gul-Marie Stopes Society; Waqas Hameed-Marie Stopes Society; Muhammad Ishaque-Marie Stopes Society; Sharmeen Hussain-Marie Stopes Society; Asma Balal-Marie Stopes Society

The renewed focus on quality in the era of sustainable development goal (SDGs) has galvanised efforts to develop measures of service quality. Several frameworks and approaches have been developed to monitor quality of family planning services; however, none of these create a concise measure of family planning service quality (such as a unidimensional index) that can be used to compare performance of facilities across space or time. The necessity to use clients’ perspectives in the evaluation of service quality has been emphasised by several authors. Currently, there is scarce evidence available on psychometric tools that measure perceived quality of family planning services, especially in Pakistan. This study aimed to develop and validate a psychometric scale to measure clients’ perceptions of quality of family planning services. Data were collected in September 2016 from 2,144 married women of reproductive age from 44 districts in all four provinces of Pakistan. A mixed-method approach was used whereby focus group discussions were conducted to elicit clients’ perceptions of quality, and items were developed on the basis of the identified themes and were subjected to factor analytic techniques for validation. The validated framework was composed of a hierarchical factor of perceived quality which produced four distinct sub-dimensions, perceived accessibility, perceived functional quality, perceived technical quality, and perceived physical infrastructure quality. The final scale consisted of 12 items, and its reliability and validity were established using Ordinal Alpha, Coefficient H, Composite Reliability, Content Validity Index (CVI), and Confirmatory Factor Analysis (CFA). This scale adds a new layer to client-centred evaluation and quality measurement for family planning programs, and can be implemented to routinely monitor quality of services owing to its parsimonious nature.
Through the Eyes of Youths: Using Photovoice to Document Food Insecurities for Adolescents

Co-authors: Vicki Simpson-Purdue University; Lindsey Pedigo-Purdue University

Background: According to the 2017 Map the Meal Gap report, one of every seven Indiana residents is hungry, with more than 300,000 children in Indiana unsure where their next meal will come from. In Indiana, 20.4% of children under the age of 18 live in poverty and 21.2% are food insecure. Food insecurity, defined as “the lack of consistent access to adequate food,” is one of many difficulties associated with poverty. Notably, food insecurity is twice as prevalent in households with adolescents as in households with children under 4 years of age. Problems related to food insecurity in adolescents span personal, home, school and community contexts, taking a toll on young people at important developmental stages. Impacts include poor nutrition, poorer health, higher rates of mood, anxiety and behavioral disorders (including depression and suicide), increased substance abuse, and negative school performance, among others. Teens experiencing food insecurity often feel the weight of adult responsibilities, thus either entering the job market early or in cases of severe deprivation turning to dangerous and risky strategies such as stealing, selling drugs or shoplifting to meet basic needs.

Methods: This pre-test/post-test pilot study used Photovoice with 20 low-income teens in two Indiana counties to document food insecurities. Photovoice is an innovative way to engage and empower young people in their communities and can help document food insecurities faced by young adolescents. Photovoice uses images captured by participants to create information and evidence which can support social action and change by allowing vulnerable or marginalized populations to share their stories through images and words. Surveys on positive youth development and empowerment were used to assess the impact of the photovoice process on the teens. Qualitative analysis of the narratives created using the images was completed to determine common themes.

Results/Conclusions: Adolescents embraced the photovoice process, eagerly sharing their images and stories with researchers and community groups. Paired T-tests indicated that participating in the photovoice process increased feelings of empowerment for the teens. Qualitative analysis of the narratives demonstrated that difficulties accessing healthy foods are similar for teens in different areas of the state. A full scale study involving teens from across the state of Indiana is now being done to obtain a clearer understanding of food insecurities and support development of more appropriate resources and programs to address these issues. Photovoice can be a very powerful tool to support policy, systems and environmental changes.
Mid Level Health Care Providers: critical to achieve Sustainable Development Goals

Co-authors: Shweta Singh-NHSRC; Nishant Sharma-NHSRC; Prankul Goel-NHSRC; Vinay Bothra-NHSRC

Introduction

Failures in the formulation of rational, sustainable and need-based health workforce policies in India have been identified as one of the major reasons for impediment towards realizing the health aspirations of Sustainable Development Goals. Recently, there has been increasing focus on task shifting through creating a cadre of Mid-level Health Care Providers (MLHP) to provide a range of comprehensive primary care services to the community. MLHPs will be assigned to health outposts, which serves as the first point of contact with the community and cover a population (5000). This paper highlights the learning experiences and challenges faced in relation to the MLHP policy initiative in India.

Methods

A systematic data collection was conducted across 11 states by carrying out monitoring visits, reviewing routine reports and conducting correspondence over email and telephone. All the relevant Government manuscripts related to MLHP training were reviewed.

Findings

The policy for Mid-level Health Care Providers is currently been implemented across 11 states in India. The training program is aimed at nurses and is based on a common set of essential skills to provide a range of comprehensive primary health care services. The main objective of this initiative is to provide primary health care services closest to the community. Key factors for the successful uptake of this intervention include financial support from Government of India, pro-active leadership in states, flexibility in course design and continuous mentoring.

Challenges include issues with post-training deployment and retention and adequate infrastructural strengthening of health facilities. The sustainability of this initiative lies in creating and sustaining an enabling environment for MLHPs, through appropriate regulatory and workforce management frameworks, adequate incentives and a holistic health systems support.

Conclusion

Overcoming the shortage of health work force, especially in low resource settings is a daunting challenge. To achieve the health-related Sustainable Development Goals and more broadly progress towards Universal Health Coverage: task shifting provides a successful option; provided policymakers adopt the right evidence-based approaches. It provides a realistic possibility of increasing the human resources fast enough to meet the urgent need. Task shifting must be implemented within systems that contain adequate checks and balances to protect both health workers and the people receiving treatment and care.
Functioning and time utilisation by female frontline health workers and their role in supporting community participation in South-India: A time and motion study

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Background: Female multipurpose health worker and community health worker, namely ANM and ASHA, are the most important frontline health workers in rural India. This study was conducted to assess the spectrum of service delivery, time utilisation, and factors affecting the functioning of ANMs and ASHAs in South-India.

Methods: We conducted a mixed methods study, time and motion observations and qualitative assessment, in three districts across two states. We directly observed 43 ANMs consecutively for 6 working days and computed median times for activities performed. We in-depth interviewed all the selected ANMs and later conducted an FGD to substantiate the findings from observations and interviews. We conducted 6 FGDs with ASHAs to understand their role. We used thematic analysis for qualitative data.

Results: ANMs worked for median seven hours a day (7:10 hours, non-tribal; 6:20 hours, tribal). ANMs spent 60 percent of their on-job time on programmatic activities (median 22:38 hours; IQR, 20:48 – 27:01 in a week), including record keeping. Emphasis is more on home visits for maternal health, universal immunisation, school health and seasonal diseases. ANMs spent rest of the time in training, meetings with seniors, community, and other non-health related work. Services for communicable and chronic diseases were less. ASHAs had an informal work schedule and provided services through personal home visits. They supported ANMs in outreach activities, identification of cases, community mobilisation, and counseling. ANMs acknowledged ASHAs’ role in increased coverage of services. Both felt overburdened with newer programs, which they were incapable of incorporating into their schedules. There were no renewed job descriptions, work plans, and supervision guidelines. ANMs prioritised activities asked by the seniors and ASHAs prioritised activities with high incentives. ANMs and ASHAs had limited role in encouraging community participation for planning and monitoring. Community’s and fellow workers’ support, and ease of transportation were the stated facilitative factors. While lack of support and acknowledgment from health administration, heavy rains, difficult terrain, and security concerns were the barriers. Health administration often disrupted the regular functioning of ANMs and ASHAs for untimely training, meetings and other ad-hoc work.

Conclusion: ANMs and ASHAs are overworked, they often multitask and fail to deliver efficiently. Both have good coordination for outreach activities but have limited role in influencing community participation. The administration needs to re-assess the load and reduce expected work, provide strong supervisory support, and make conscious efforts to pose fewer disruptions in regular working of health workers.
The financing need for expanded maternity protection in Indonesia

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Background

Only 42% of children less than 6 months were exclusively breastfed in Indonesia in 2012, which means that the majority of infants are at an unnecessarily high risk of morbidity and mortality. Studies have shown that optimizing maternity protection programs may result in better breastfeeding and, thus, reduce infant deaths. This study aims to estimate the potential cost implications of optimizing the current paid maternity protection program (e.g. maternity leave, lactation room), and to show the potential challenges in its implementation in Indonesia.

Method

We used data from various literatures and data sources to estimate the potential cost implication of the current and increased maternity leave length (three and six months) from 2020 to 2030, and we simulate the budget impact to the government if maternity cash benefit are jointly paid by the workplaces and government. Cost of setting up lactation rooms was estimated using the standards developed by Alive and Thrive and the number of medium and large formal sector companies in Indonesia. Short interviews were conducted in five different provinces in Indonesia to identify current and potential challenges in applying both current and improved maternity protection policies.

Result

The cost of paid maternity leave in 2030 may reach US$166 million (three months leave) and US$333 million (six months leave). These costs may be borne by the government if they decided to fully cover the cash benefit by 2030. The cost of setting up lactation room in 80% of medium and large companies in Indonesia may reach US$35 million (basic standard). Three main challenges were identified through our interview, namely strong existence of BMS marketing, lack of lactation rooms in work places, and existence local custom that may hamper successful adequate breastfeeding.

Conclusion

Our study shows that the budget to expand maternity leave may be high, but it is still far lower compared to its potential non-economic benefit (e.g. number of infant death averted) and cost savings as a result of adequate breastfeeding in Indonesia (US$ 1.54 billion). Sharing the cost of paid maternity leave between government and employers may provide a feasible solution to bring maternity protections to all new mothers across Indonesia. The challenges in implementing successful maternity protection programs need to be addressed at all levels from the government to society in general by, among others, proper coordination between stakeholders, sufficient knowledge and information dissemination.
Diversidad Cultural y Sistema Público de Salud: problemáticas y desafíos en los procesos de atención de los pueblos indígenas en contextos urbanos

ANTECEDENTES

Los pueblos indígenas de Latinoamérica presentan los niveles más extremos y generalizados de pobreza, así como las peores condiciones de salud-enfermedad-atención. Estos grupos instalan relaciones distintivas y problemáticas en la utilización de los servicios de salud que hace que se los diferencie de otros conjuntos sociales.

Con la intención de aportar a las condiciones de acceso a una atención oportuna y eficaz de los pueblos indígenas, presentamos una investigación antropológica cuyo objetivo es analizar los procesos de atención de la población indígena de Rosario (Argentina) y su relación con los servicios públicos de salud.

METODOLOGÍA

Investigación cualitativa. Desde un enfoque etnográfico se aborda por un lado, las trayectorias de atención de las familias/grupos domésticos indígenas de la ciudad de Rosario -incluyendo la utilización de distintos recursos terapéuticos-, y por otro, de las relaciones, las prácticas y los sentidos puestos en juego por los equipos de salud en la atención de dicha población.

RESULTADOS

No existen datos epidemiológicos específicos de las poblaciones indígenas debido a que no se registra la identidad étnica en los servicios de salud.

Los indígenas utilizan, en forma simultánea o sucesiva, distintos recursos terapéuticos: curador “tradicional” indígena (piogonaq); recursos terapéuticos religiosos; prácticas de autoatención (incluimos la farmacopea indígena); servicios biomédicos.

Se evidencia en la mayoría de los profesionales un notorio desconocimiento del universo de significados otorgados por estas poblaciones al proceso salud-enfermedad, y de los distintos recursos terapéuticos a los que apelan ante sus padecimientos.

Las caracterizaciones realizadas por los profesionales sobre los indígenas expresan una visión homogeneizadora, sin distinguir matices ni heterogeneidades al interior de los mismos. Esto genera procesos de estereotipación cuyos efectos se expresan en la esencialización y al mismo tiempo reducción de la complejidad de las experiencias sociales.

DISCUSIÓN

La premisa de la homogeneidad cultural obstaculiza un abordaje de lo cambiante y dinámico de los procesos salud-enfermedad-atención de las poblaciones indígenas y de las contradicciones entre esta población y las instituciones sanitarias.

Consideramos de vital importancia desandar estas construcciones estereotipadas, para ello destacamos la necesidad de:

- incluir una perspectiva que contemple las diferencias intergeneracionales de estas poblaciones en torno al proceso de salud-enfermedad-atención.

- introducir la perspectiva de género, así como también, sus dinámicas migratorias.

CONCLUSIONES
Toda propuesta sanitaria dirigida a pueblos indígenas, debe partir y contener a sus representaciones y prácticas sociales, las definiciones locales, su modo de problematizar, definir cursos de acción, considerándolos desde una perspectiva histórica y política.
Estimating Cost-effectiveness Thresholds in low and middle income countries: the example of Indonesia

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Health systems in low- and middle-income countries (LMICs) face considerable population health needs with highly constrained resources and many challenges in allocating resources in an efficient and equitable manner. A central question in healthcare resource allocation is whether a new intervention represents "value for money" and should be recommended for public funding or not. Interventions can be considered cost-effective if the associated health benefit outweighs the health costs that are generated elsewhere - what economists call "opportunity costs". Thresholds that have historically been applied to inform resource allocation decisions in LMICs (e.g. the use of 1-3 times a country's gross domestic product (GDP) per capita) are not based upon empirical assessment of the opportunity costs.

In this paper, we use detailed data from Indonesia and several econometric approaches to provide estimates of opportunity costs to inform health maximising resource allocation decisions in Indonesia. We demonstrate the use of complementary data sources to empirically estimate the impact of health expenditure on health – the core econometric component when deriving a supply-side threshold – both through changes in health policy and direct health expenditure. We also show how these can be translated to provide ranges of cost-effectiveness thresholds.

We first provide an estimate of the impact of health care on health outcomes, exploiting the discrete expansions of Indonesia’s public health insurance and making use of the Indonesia Family Life Survey (IFLS). In addition to analysing the effect of the policy on health, we also explore the impact on intermediate outcomes such as healthcare access and utilisation. We find no significant relationship between health insurance and mortality in Indonesia; however, we do find evidence that intermediate outcomes of healthcare access can help explain this result. Secondly, we conduct a panel econometric analysis, using a set of provincial level health expenditure and mortality data, and accounting for the endogenous relationship between the two variables. To translate the estimates of health expenditure impacts to a threshold, we use estimates of population disease burden measured in disability-adjusted life years (DALYs).

In conclusion, we demonstrate several approaches to empirically estimate cost-effectiveness thresholds in a LMIC, providing valuable evidence to policymakers when making decisions to allocate scarce health resources. We also highlight critical data needs for the reliable estimation of cost-effectiveness thresholds where information is needed on health outcomes, intermediate health system effects and disaggregated health expenditures.
Decentralisation and Management of Human Resource for Health: A Decision Space Analysis

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Abstract

Background

Human resource management in health is central to health system strengthening. The availability and effective management of health human resource is a function of the existing health policies. Though decentralisation is widely adopted as a health policy option in several countries, its implications on human resource for health management has not received adequate research attention. This study aims at investigating decentralisation policy in practices and the extent to which decentralisation practice transfers management autonomy and discretion from national to subnational units as well as the effect of the level of decision space at the subnational level on human resource management in the health sector.

Methods

A mixed methods study design was adopted employing a cross-sectional survey, semi-structured interview and document analysis. The respondents included health managers from the regional, district, sub-district and hospital settings as well as facility managers from the community-based health planning and services zones. A decision space framework was employed to measure management autonomy and discretion at various levels of the study area. Descriptive statistical analysis was used to analyse and report the data.

Results and discussion

The study reported that in practice, management authority for core human resource functions such as recruitment, remuneration, personnel training and development are centralised rather than transferred to the subnational units in the study area. It further reveals that autonomy and discretion for human resource management diminishes along the management continuum from the national to the community level. Decentralisation was however found to have led to greater autonomy in performance management. The study also reported the existence of discrepancy between the wide decision space for performance management exercised by managers at the subnational level and a rather limited discretion for providing incentives or rewards to staff.

Conclusion

The practice of decentralisation in some settings (the Ghanaian health sector) is more apparent than real. The limited autonomy and discretion in the management of human resource at the subnational units have potential adverse implications on effective recruitment, retention, development and distribution of health personnel. Therefore, further decision space is required at the subnational level to enhance effective and efficient management of human resource to attain the health sector objectives.

Keywords: Decentralisation, Decision Space, Human Resource Management, Health System Reforms, Ghana
Reducing waiting time and raising outpatient satisfaction in a Chinese public tertiary general hospital—an interrupted time series study

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It is globally agreed that a well-designed health system deliver timely and convenient access to health services for all patients. Many interventions aiming to reduce waiting times have been implemented in Chinese public tertiary hospitals to improve patients’ satisfaction. However, few were well-documented, and the effects were rarely measured with robust methods. We comprehensively document the studied hospital’s efforts to achieve the organizational and structural changes in order to reduce waiting times for consultations and filling prescriptions.

We conducted a longitudinal study of the length of waiting times in a public tertiary hospital in Southern China which developed comprehensive data collection systems. Around an average of 60,000 outpatients and 70,000 prescribed outpatients per month were targeted for the study during Oct 2014-February 2017. We analyzed longitudinal time series data using a segmented linear regression model to assess changes in levels and trends of waiting times before and after the introduction of waiting time reduction interventions. Pearson correlation analysis was conducted to indicate the strength of association between waiting times and patient satisfactions. The statistical significance level was set at 0.05.

The monthly average length of waiting time decreased 3.49 min (P =0.003) for consultations and 8.70 min (P =0.02) for filling prescriptions in the corresponding month when respective interventions were introduced. The trend shifted from baseline slight increasing to afterwards significant decreasing for filling prescriptions (P =0.003). There was a significant negative correlation between waiting time of filling prescriptions and outpatient satisfaction towards pharmacy services (r = −0.71, P =0.004).

The evidence generated by robust method proved that the interventions aimed at reducing waiting time and raising patient satisfaction in Fujian Provincial Hospital are effective. The studied hospital used its integrated health information system to support a well-designed and carefully arranged quality improvement in reducing waiting time and raising patient satisfaction. A long-lasting reduction effect on waiting time for filling prescriptions was observed because of carefully designed continuous efforts, rather than a one-time campaign, and with appropriate incentives implemented by a taskforce authorized by the hospital managers. This case provides a model of carrying out continuous quality improvement and optimizing management process with the support of relevant evidence. This typical case set up an example for the other Chinese public tertiary hospitals, as well as the overloaded public hospitals in other settings to implement organizational and structural changes in order to address the waiting time issue.
The practice of power in the Indonesian health systems: a case study of health information systems on HIV in Bali Province

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Until recently, large emphasis on health information performance monitoring is paid to data production processes while how these data are used by different actors to produce legitimate knowledge for decision making is rarely been investigated. In order to understand the practice of power in the health information systems, a qualitative study was conducted in five districts in Bali Province, Indonesia. Data were collected through policy document analysis, health facility based survey involving 63 primary health care facilities, in-depth interviews with various representatives of government officials, non-governmental organisations, health providers, key population groups, and wider community. We also conducted field observation at five community health centres.

We found that even though health data are generated, compiled, and analysed in the correct manner, the use of these data to create health information and to produce legitimate knowledge to guide decision making around resource allocation is contingent upon power relations of multiple actors at different levels. Health actors at different levels contribute to the production of local knowledge and effectively used this knowledge to leverage their political agendas. Local elites align with national and global elites to produce legitimate knowledge to appropriate their actions at the expense of inequality in health access and health outcomes. We argue that health information systems are not neutral but rather political. It is a product of complex power relations of multiple actors with their own interests. Rather than as management and oversight tools to improve health outcomes, health information systems is a political instrument of different actors to prioritise health actions, resources, intervention areas, and target population.
Alison Swartz, University of Cape Town
Abstract Id: 3355

Making what’s counted, count: Using data on respectful maternity care collected by rapid mobile phone surveys to improve health system responsiveness in India

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Background
In India, where rates of disrespect and abuse during maternity care are high and women’s access to phones is increasing steadily, phone surveys may be a rapid, low-cost alternative to traditional approaches for capturing data on women’s experiences during antenatal care and childbirth. However, generating data is not sufficient to addressing the problem. This study explores the potential uses of data on respectful maternity care (RMC) by government officials and healthcare providers from the national down to the sub-district level, with the broader aim of optimizing data use to improve to women’s experiences of care during pregnancy and childbirth.

Methods
Key informant interviews (n=34) were conducted with national- and state-level health government policymakers, district and block level medical officers, and frontline providers in rural Rajasthan and Madhya Pradesh. Interviews explored respondent engagement with quantitative health survey data, the use of data for health planning and strategic decision-making, as well as suggestions and concerns about using RMC data to address violations of women’s rights and support broader health system improvements.

Findings
At the national and state levels, government actors were interested in accessing granular data on facilities to better monitor field realities, but also emphasized that providers were often doing their best in resource-constrained environments. “Snapshot” mobile phone surveys data was often viewed as a distraction rather than well-integrated aspect of their health monitoring information system. Respondents at the sub-district level felt unable to engage with or react to health data and instead looked to state and district level leadership to set priorities and direct their focus. Sub-district providers expressed concerns about being scapegoated in the event of scandals and inquiries by high level government actors, civil society and the media, and worried that data would be one-sided and used punitively. Respondents at several levels emphasized the importance of careful implementation, suggesting that surveys conducted by urban call centres must be mindful of the different dialects and lived experiences among marginalized rural women.

Discussion / conclusions
This study suggests that while rapid phone surveys on RMC hold potential to draw attention to women’s experiences during pregnancy and childbirth, government health system actors need data to be integrated into existing HMIS. Some also emphasized that this data is better used to support systemic change rather than punitive action – suggesting potential conflict with a rights- or justice-oriented approach to the use of RMC data.
Service delivery bottlenecks in HIV testing for TB patients: recommendations to strengthen TB/HIV Collaboration in the Philippines

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The Philippines has a high burden of both TB and HIV yet the WHO estimates that only 13% of Filipino TB patients know their HIV status. The present study aims to answer the question, "what are the bottlenecks in service delivery of HIV testing to Filipino TB patients?"

This is a qualitative study which utilized ten focus group discussions with stakeholders from various levels and sectors of the Philippine health system including program managers (n=9), representatives of non-government organizations (n=11), patient organizations (n=6), primary healthcare center personnel (n=18) and community health workers (n=16) involved in TB/HIV service delivery. FGDs were voice recorded and transcribed verbatim in Filipino using InqScribe software. OpenCode 4.03 software was used to guide qualitative data analysis.

Stakeholders identified five areas of service delivery bottlenecks: policy, operational, human resources, and patient factors. Policy issues include devolved programmatic decision-making, limitations of existing policies on HIV testing and counseling, guidelines written in technical English, weak knowledge transfer mechanisms from upper to lower levels of health system, issues in surveillance data for TB/HIV. Operational issues include delays in confirmatory testing from central reference laboratory, loss of transient patients, lack of service delivery networks among TB and HIV service providers, and delays in supply. Human resource issues include fast turnover of laboratory technicians because of low salary and lack of permanent positions, stigmatization behaviors among overburdened healthcare personnel, lack of confidence among healthcare personnel to deliver PITC to TB patients. Patient factors include poor knowledge among TB/HIV co-infection among TB patients, and conservative culture and delayed health seeking behavior among patients.

The study is the first to describe implementation issues in TB/HIV collaboration in the Philippines. There is a need to offer PITC among TB patients not only in high HIV-prevalence areas. Concrete guidelines of how technical knowledge will be transferred from each level of the health system need to be crafted. An inclusive service delivery network between TB and HIV care providers from the public and private sector need to be initialized. Health promotion and advocacy activities about TB/HIV co-infection need to be done to avert potential TB/HIV epidemics.
Diagnostic Errors and Inappropriate Antibiotic Prescription: A Quasi-Experimental Study of Primary Care Providers in Rural China

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Introduction: China is the second largest user of antibiotics and has one of the highest rates of antibiotic resistance. Existing studies analyzing prescription records document high rates of antibiotic prescription by primary care providers. However, identification of clinically inappropriate prescriptions and their determinants using records may be complicated by diagnostic error, inaccurate records, and clinic-level differences. This study uses an objective measure of inappropriate prescribing practice to analyze its association with diagnostic practice and knowledge in a representative sample of village and township providers in rural China.

Methods: To assess clinically inappropriate antibiotic prescriptions, we employed unannounced standardized patients (SPs) presenting symptoms of three fixed disease cases to village and township providers in three provinces. The study also administered two types of clinical vignettes presenting identical disease cases to assess the diagnostic and prescription knowledge of the same providers: full vignettes in which providers diagnosed the case and suggested treatment and treatment-only vignettes where providers were given the correct diagnosis and only suggested treatment.

Results: In August 2015, we successfully completed 526 SP interactions. Overall inappropriate antibiotics were prescribed in 221 out of 526 (42%). Compared to SP interactions, prescription rates were 29% lower in the full clinical vignettes (42% vs 30%, p<0.0001). Compared to full vignettes, rates were 67% lower in the treatment-only vignettes (30% vs 10%, p<0.0001).

Conclusion: Inappropriate antibiotic prescription is common among primary care providers rural China. Our data suggest that diagnostic errors play a greater role than therapeutic errors in driving unnecessary antibiotic prescriptions. Interventions to improve diagnostic capacity among providers in rural China are needed.
Health Systems and civil society response to pandemics: The case of Ebola in an uninfected West Africa Country

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Background: The 2014 West Africa Ebola outbreak evolved into the largest, most severe and most complex outbreak in the history of the disease. The three most-affected countries faced enormous challenges in stopping the transmission, providing care for all patients. These challenges were largely reported as health system related and civil society response to the condition in the affected countries. Although Ghana had not recorded any confirmed Ebola case, the health system and civil society In Ghana responded to the outbreaks in neighbouring countries in various ways. This qualitative study was conducted to document the response of health system and civil society to the outbreak and strategies for containment in the event of an outbreak of the disease in Ghana.

Methods: We conducted five Focus Group Discussions (FGDs) with health workers (N=44), twenty-five FGDs with civil society members (N=235) and forty in-depth interviews with various stakeholders in five of the ten regions in Ghana. The interviews were recorded digitally and transcribed verbatim. We adopted framework analysis approach to manage our data using NVivo 10 software.

Results: The results showed the country in response to the outbreak had established an inter-ministerial committee under the leadership of the Minister of Health and formally developed a national EVD preparedness and response plan in August 2014 to provide direction to disease surveillance, outbreak investigation and management. Training of health workers were conducted across the country as well as screening at various ports. We further found that Ebola treatment centres were established, however, these centres were not well-equipped with logistical challenges reported across the study regions. There was intense fear about the condition among both health workers and civil society largely due to perceived fatality of the condition. Civil society indicated they will be afraid of both suspected and treated Ebola patients and their household. The fear resulted in health workers unwilling to work in Ebola treatment centres and taking specimen for investigations. Awareness about the disease was high but with misconceptions among civil society and some health workers.

Discussion / conclusions: Measures were put in place to enable the health system prevent, detect cases promptly and contain the outbreak. Both health workers and civil society had intense fear for the condition and were unwilling to take care of suspected cases. Some of the fears emanated from misconceptions about the condition and the belief that Ghana had not prepared adequately for any possible outbreak.
Health inequity on access to services in the ethnic minority regions of Northeastern Myanmar

Co-authors: Kun Tang-Peking University School of Public Health; Yingxi Zhao-University of Washington Department of Global Health

Background: To analyze health inequity in the ethnic minority regions of Northeastern Myanmar from three aspects: geographic barrier, gender-based disparity and financial burden of health services

Methods: A multistage-stratified random cluster survey was conducted in Shan State Special Region 2 (Wa region) and Eastern Shan State Special Region 4 (SR4) of Northeastern Myanmar in 2016. Data was collected on demographics, household, health status, health care, household economy, health service utilization. Linear and logistic regression were conducted to understand the association between geographic distance, gender and household income and inpatient/outpatient service utilization

Results: Residents living within 5 km paid more outpatient visit to healthcare facilities in the past two weeks, compared with residents living between 5-20 km and over 20 km (90.06, 54.84 and 54.02 per thousand population per two weeks), while residents living within 5 km and between 5-20 km had undergone slightly more inpatient therapy than residents living above 20 km in the past year (67.65, 67.87 and 51.44 per thousand population per year). Household income was positively associated with outpatient behavior, those aged above 14 with household income above 720 USD were more likely to seek outpatient service (OR 1.43, 95%CI 0.98-2.10) than income between 360 and 720 (OR 1.04, 95%CI 0.69-1.55), and this association also applied to inpatient visits (OR 1.99, 95%CI 1.09-3.64 vs. OR 1.53, 95%CI 0.82-2.86). After adjusting for other covariates, female above the age of 14 were less likely to seek inpatient treatment compared to male (OR 0.55, 95%CI 0.35-0.84), and slightly unlikely to seek outpatient treatment (OR 0.86, 95%CI 0.64-1.15)

Conclusion: Geographic barrier, gender-based disparity and financial burdens were identified as key causes that significantly restrict ethnic people’s access to healthcare facilities. The study concludes that tackling health inequity in Northeastern Myanmar ethnic regions requires an improved primary healthcare system, proper financial protection mechanisms and a special focus on women.
Ingan Tarigan, Ministry of Health
Abstract Id: 3783

Inequity of the Utilization in National Health Insurance (JKN) in Indonesia: Implication Issues

Co-authors: Ingan Ukur Tarigan-Ministry of Health; Tati Suryati-Ministry of Health; Anni Yulianti-Ministry of Health

Since January 1, 2014, Indonesia has established National Health Insurance (JKN) program, where the purpose of JKN to assure the needs of health for all Indonesian citizens. National Social Security Systems (BPJS) confirms two fundamental principles in the provision of the health insurance which are social insurance and equity. JKN memberships are categorised as two main groups of membership, namely tuition assistance recipients (PBI) and non-recipients of tuition assistance (non-PBI). This research aims to analyze the equity of access of National Health Insurance (NHI).

This analysis using quantitative data from Health-care Social Security Agency (BPJS Kesehatan) in the period between January 2014 – 2015 and National Socio-Economic Survey (Susenas), 2014.

The number of participants in JKN June 2015 reached 146.4 million participants, which means more than half of Indonesia’s population already has JKN card. The result is accordance with the analysis of Susenas 2014 data showing that 51.9% of Indonesia’s population has been covered by health insurance. The increasing number of participants JKN not necessarily utilize community health facilities. Utilization of outpatient by group of JKN participants shows that non PBI group (58.7%) is six times higher in utilizing outpatient than PBI group (9.2%). Utilization of inpatient by group of JKN participants shows that non-PBI group (6.4%) is three times higher in utilizing inpatient than PBI group (1.7%). By province, outpatient and inpatient utilization is generally lower in provinces in eastern Indonesia than in West Indonesia. The analysis of the concentration index proves that there is a difference between the poor and the rich, where the rich group who have health insurance more use hospital outpatient care rather than the poor who have health insurance.

BPJS need to increase the coverage on a group of non PBI by simplifying registration and payment of membership JKN especially in areas of difficult access to information, by making new innovations adapted to the conditions of the local area (cooperation with local government officials and the private sector); the government improve public access to health facilities (availability and readiness for health worker and infrastructure), for wide working area with geographically difficult but the amount of dense population suggested in the region to build infrastructure such as health facilities, so as easily be reached by the public, while for regions with geographically difficult, but the population is small, the government support for the poor given the cost of transport to health facilities.
Celia Taylor, University of Warwick
Abstract Id: 501

The predictive validity and fairness of the Living Goods selection tools for Community Health Workers in Kenya

Co-authors: Celia Taylor-University of Warwick; Ruth Ngechu-Living Goods; Frances Griffiths-University of Warwick; Richard Lilford-University of Warwick

Background: Ensuring that selection processes for Community Health Workers (CHWs) are fair and effective is important due to the scale and scope of modern CHW programmes, but they are relatively understudied. While community involvement in selection should never be eliminated entirely, there are potential methods that could be used as adjuncts that would help to identify those most likely to be high-performing CHWs. This study evaluated the predictive validity and fairness of three written tests and two individual sections of a one-to-one interview used for selection into CHW posts in eight areas of Kenya.

Methods: Data on the selection scores, post-training assessment scores and on-the-job performance in three health areas and sales of goods were obtained for 547 CHWs, together with basic demographic data (age, gender, education and previous work as a CHW). The correlations between each selection score and performance outcome were calculated and compared to established thresholds. Exploratory differential prediction analysis was used to explore demographic variables that were identified as potential sources of unfairness.

Results and discussion: None of the correlations between selection scores and outcomes reached the 0.3 threshold of an "adequate" predictor. Correlations were higher for the written components of the selection process compared to the interview components, with some small negative correlations found for the latter. Age was identified as the only potential demographic mediator of the relationship between scores and outcomes: younger CHWs could be disadvantaged at selection if the key outcome was post-training assessment scores but advantaged if it was child health assessments.

Conclusion: If the outcomes included in this study are considered critical, then further work to develop the selection tests is required. This could include increasing the length of the written tests to make them more reliable, for if a test is not reliable then it cannot be valid. However it is also important to identify if any of the selection scores can predict retention in post or quality of care, which were not possible to include as outcomes in this study.
Community participation in continuous quality improvement (CQI) in Australian Aboriginal and Torres Strait Islander Primary Health Care (PHC) services.

Co-authors: Nalita Turner-James Cook University; Judy Taylor-James Cook University; Karen Carlisle-James Cook University; Sarah Larkins-James Cook University; Ross Bailie-Sydney University Centre for Rural Health; Sandra Thompson-Western Australian Centre for Rural Health

Purpose

This presentation will offer a fresh perspective on community participation by Aboriginal or Torres Strait Islander communities in continuous quality improvement (CQI) systems in Australian Indigenous primary health care (PHC) services. Building concepts about these processes, from an Indigenous perspective, enables greater transferability of ideas, provides some predictability about participatory outcomes, and enables a more comprehensive and nuanced understanding of the role of communities in CQI and PHC systems.

Focus/content

The aim of our three-year study 'Lessons from the best to better the rest' was to understand the interaction of contextual factors in facilitating quality improvement in six Indigenous PHC services in remote, rural, or regional Australia. In collaboration, using case study design, we collected quantitative and qualitative data about CQI at the micro, meso, and macro health system level. Analysing qualitative data from 134 interviews we found, in four of the six services, strong involvement of the community in needs identification, collaborating in CQI processes to ensure appropriateness, decision-making, and cultural mentoring of staff. It was whole of community participation or Elders or community Indigenous staff of the PHC service representing community values. Just as important as the outcomes of participation was the process. Participation was expressed from a deep cultural foundation and consistent with cultural rules and expectations with culture underpinning all aspects of health care. From these foundations, community participants and healthcare staff learnt to trust each other, create safe spaces, and experience deep two-way learning. This was not easy; as one PHC staff put it ‘coming to a level of half understanding between us’. From an Indigenous perspective, the concept of is ‘reciprocity’.

Significance for the sub-theme area and field-building dimension of relevance

Integrating the effect of overarching contextual factors such as race, gender, power, or culture in health systems research is known to be essential but it is difficult. Conceptually, we can use our Indigenous-centered idea of reciprocity; trust, safe places, and two-way learning underpinning community participation as an intermediary between the broader context and the PHC system. The role that communities play becomes understandable and we can track their influence and enhance it. We are now explicitly testing community participation as an intervention through Indigenous participatory women’s groups attempting to make improvements in maternal and child health.

Target audience

All those who are interested in the interplay of contextual factors surrounding and influencing PHC systems.
ANNA TEMBA, Pathfinder International  
Abstract Id: 869

**Programming for adolescents and youth through mainstreeaming youth friendly services to public health facilities in urban Tanzania.**

Co-authors: ANNA JOSEPH TEMBA - Pathfinder International

**Introduction/Background**

In Tanzania, access to contraceptives for youth and adolescent is critical to prevent unintended pregnancies, yet the percentage of adolescents using modern contraception remains low (13.3%) and unmet need for contraception is high (42.6%) (TDHS 2015/16). For decades, organizations and governments have supported implementation of youth-friendly services (YFS) to increase uptake of services, however experience suggests that stand-alone youth clinics and separate-space YFS can be unsustainable. To ensure youth and adolescent responsive health system it necessary to have a model that responds to adolescent needs at each service delivery point at health facility level which recognizes the fact that adolescent/youth prioritize privacy, confidentiality and respectful care (WHO). It is therefore critical to implement and learn from mainstreamed models of service delivery that are responsive to the needs of adolescents and youth and have the potential to be scaled and sustained.

**Methods**

The Chaguo la Maisha project in Tanzania mainstreamed YFS in existing public health facility contraceptive services. Health care providers were trained to offer contraceptive services and YFS, and they were then mentored to ensure skills acquisition through an innovative digital mentorship app. Some facilities were upgraded and equipment supplied to increase privacy and confidentiality of services. Demand generation targeting young people, client follow up, and collection of client feedback were conducted by community-based mobilizers using a digital app with an embedded contraception counseling algorithm, including Long acting reversible contraception. [https://www.pathfinder.org/wp-content/uploads/2017/04/Mainstreaming-Youth-friendly-SRH-Services-in-the-Public-Sector-in-MZ-TZ.pdf](https://www.pathfinder.org/wp-content/uploads/2017/04/Mainstreaming-Youth-friendly-SRH-Services-in-the-Public-Sector-in-MZ-TZ.pdf)

**Results/Findings**

• In the 2 years of project implementation, 52614 adolescents received contraception services. This is 34% of all clients served in the program • Among them 60% (31781) selected more effective long acting contraceptive methods unlike at baseline and general population whose preference was skewed to the short-term methods. • Method mix changed from predominantly short term (injectable) to predominantly long term (implants) • About 24% of clients that were referred by community mobilizers were between 10 - 24 years old. • Mentorship improved quality of services for providers in serving youth, more visits resulted to more competency

**Discussion/Recommendations**

Health system approach that focuses on equipping young people with knowledge and skills, competent providers to offer adolescent responsive services, community support and follow up and improving facility characteristics is key to mainstreaming adolescent health and when well implemented can result to remarkable increase in youth uptake of services particularly LARC.
Assessment of 24x7 health facilities to improve the Maternal Child Health (MCH) indicators, using facility gap analysis pointers from Central India

Co-authors: Ajay Trakroo - UNICEF; Sarveshwar Narendra Bhure - Ministry of Health & Family Welfare, Government of India

National Rural Health Mission (NHM) was launched in the year 2005 to strengthen the Rural Public Health System of the country, improving maternal and child health and their survival are core goal of the program and since its inception has met many hopes and expectations. To further accelerate the decline in maternal and child mortality, it is important to recognize that reproductive, maternal and child health cannot be addressed independently as these are closely linked to the health status of the population in various stages of life cycle.

Chhattisgarh is the 10th largest in size, predominately forested and tribal state in central India, which has made notable progress in MCH Indicators in spite large number of districts affected by Left Wing Extremism (conflict). As per NFHS 4 data the Antenatal care service indicators have improved in the state even better than the national average. Institutional delivery has also increased to 70% from 14% in NFHS3. As per the new National Health Policy IPHS standards will act as the main driver for continuous improvement in quality and serve as the bench mark for assessing the functional status of health facilities for ensuring the delivery health care a component of Universal Health Coverage.

For improving the status of facilities, it is crucial to have information related to gaps, aligned with Indian Public Health Standards (IPHS) and Maternal Newborn toolkit (MNH Toolkit) standards. As part of endeavor to improve Maternal and Child Health indicators in the state of Chhattisgarh with focus on addressing infrastructure, human resource and quality health services through the health facilities, UNICEF collaborated with Directorate of Health Services and National Health Mission to develop a comprehensive tool, for which could identify inequalities in distribution of health facilities and evidence based planning for improvement of quality care by developing a facility improvement plan.

This paper helps to assess the health indicators indicated by facility gap analysis in 24x7 health facilities. Based on this assessment state has prioritized districts for addressing the gap analysis and develop the facility improvement plan and further helps policy makers and decision makers in developmental plans.
Factors associated with quality of under-five years' old care according to the Integrated Management of Childhood Illness guidelines in Burkina Faso primary health care facilities

Co-authors: Sabere Anselme Traore-Centre MURAZ Research Institute; Serge Somda-Centre MURAZ Research Institute; Joel Arthur Kiendrebeogo-Centre MURAZ Research Institute, The World Bank Ouagadougou; Aurelia Souares-Institute of Public Health, University of Heidelberg; Paul Jacob Robyn-The World Bank; Herve Hien-Centre MURAZ Research Institute; Nicolas Meda-Centre MURAZ Research Institute, Ministry of Health (Burkina Faso)

Background: The Integrated Management of Childhood Illness (IMCI) was initiated in order to reduce children mortality using a consultation protocol that targets the principal killing diseases and when these are diagnosed, propose comprehensive treatments and counselling. Burkina Faso is a developing country with very high indicators in terms of child mortality. The IMCI is implemented in Burkina since 2003. However, the country still faces high under 5 mortality because of problems of access to health care but also even after consultations in primary health care facilities (PHC). Many authors point lack of adherence to IMCI protocols as the main reason of this apparent fail. Our study aimed at observing the quality of the children consultation in PHCs and to find out the factors associated.

Methods: Data was extracted from a large survey on health facilities. 431 primary health facilities, belonging to 24 health districts were visited from October 2013 to March 2014 in Burkina Faso. They were located in 6 of the 13 regions of the country. The health facilities were assessed using a standard questionnaire. The health workers were also interviewed. Finally the consultations of the under 5 years old children were observed. The quality of the consultation was assessed using IMCI guidelines as a reference.

Results: 1,571 consultations were observed, carried out by 522 different practitioners. The danger signs were usually not checked (14% only checking for at least three general danger signs). The adherence for cough (75%), diarrhea (65%), fever (84%) and anemia (70%) was higher. The principal factors found to be associated with poor adherence to guidelines of consultation were female sex (Incidence Rate Ratio (IRR) = 0.91; 95% CI 0.86 – 0.95), non-nurse practitioner (IRR=0.93; 95% CI 0.88 – 0.97), IMCI training (IRR=1.06; 95% CI 1.01 – 1.11), non-satisfaction by the salary (IRR=0.95 95% CI 0.91 – 0.99).

Conclusion: Quality of under-five care is associated with health care provider in the primary care facilities. This study highlights the challenges and gives paths for improvement of children health care.
How to Study Unintended Consequences of Complex Health Interventions

Co-authors: Anne-Marie Turcotte-Tremblay-University of Montreal Public Health Research Institute; Manuela De Allegri-Heidelberg University; Idriss Ali Gali Gali-AGIR; Valéry Ridde-IRD Université Paris Descartes

Background: Complex health interventions often trigger unintended consequences that go well beyond the targeted objectives elaborated by program planners. These unintended consequences are defined as changes that occur in a social system for which there is a lack of deliberate action following the implementation of an intervention. Despite their importance and widespread nature, unintended consequences are generally neglected in research protocols and program evaluations. To illustrate this, Patton humorously referred to unintended consequences as “what-we-will-do-after-everything-else-is-done”. This shortcoming is partly due to the difficulty of predicting and measuring unintended consequences. The purpose of our presentation is to explain how researchers and program evaluators can better study the unintended consequences of complex interventions in global health.

Methods: This presentation is based on our extensive experience developing and conducting a multiple case study on the unintended consequences of a complex health intervention in Burkina Faso. Examples from our research project will be used to illustrate how to study unintended consequences, as well as the lessons learned and challenges encountered. A review of relevant theories in social science and empirical research will inform our analysis.

Results: A number of theories can be useful to help researchers study unintended consequences of interventions. For example, Rogers’ theory on the diffusion of innovations provides a classification of the different types of consequences which can guide researchers/evaluators throughout their work. Due to the exploratory nature of this research topic, we found that casting a wide net during the data collection was useful to seize relevant data. Researchers/evaluators cannot foresee all of the unintended consequences when developing their protocol so they should remain flexible and open during the data collection. For example, our interview guide had to be adapted and refined as unintended consequences became perceptible overtime. Moreover, we found that conducting observation over a long period of time allows researchers/evaluators to develop trusting relationships with participants and to witness them within a more natural context, thereby going beyond hidden behaviours and attitudes. One important challenge was to distinguish between intended and unintended consequences during the data analyses as this classification may vary depending on the standpoint of the stakeholders (e.g., program planners vs street-level workers).

Conclusion: Theories and methods to understand the unintended consequences of complex health interventions exist. Researchers and program planners should increasingly attempt to understand unintended consequences in order to judge the overall value of global health interventions.
Jeannine Uwimana Nicol, Stellenboch University, Division of Epidemiology and Biostatics. Department of Global Health and School of Public Health, University of Rwanda

Abstract Id: 3217

Improving integration of TB/HIV care into Maternal and Child healthcare using Quality Improvement approach in a rural district, South Africa: lessons learned

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Background: In order to accelerate the achievement of SDG3, there is a need for innovative approaches that enhance not only health outcomes related to Maternal and Child health (MCH), TB and HIV but also strengthen health systems in developing countries. Integration of care has been advocated by various stakeholders and one of the success stories in sub-Saharan Africa is the integration of TB and HIV programs. But little progress has been made to integrate both TB and HIV care into MCH programs. Its in that light that an operational research was conducted to enhance the integration of TB/HIV services into MCH program using Quality Improvement approach using a cohort tool in order to enhance TB/HIV/MCH integrated services and better treatment outcomes.

Methods: A QI approach using a paper based cohort tool linked to ANC registers was developed and in seven health facilities in Harry Gwala district, KZN over a period of two years. Multidisciplinary facility based QI teams were established at each facility and data was obtained monthly from the ANC register in order to calculate the number of patients who missed each PMTCT care and identify gaps in care. Patients who had fallen through the gaps were recalled to mitigate service failures. Both quantitative and qualitative research methods were used to collect and analyse the data. Findings: the data show significant improvement in all six previously underperforming HIV/TB care processes (p <0.001). The probability of HIV positive patients receiving three key sequential HIV care steps increased from 22.2% for dual therapy, and 49% for the HAART care pathway to 96% in both, a 4.3- and 2-fold increase respectively. The provision of three key sequential steps to TB treatment reached a product of 90%. Conclusions and lessons learned: Quality Improvement approach supported by a meaningful, valid programmatic and patient data in an easy-to-use Cohort Tool linked to the ANC Register supported frontline staff to effectively apply QI methods to rapidly close gaps in care, provide reliable, integrated TB/HIV/MCH care. Unlike routine DHIS data, the cohort tool allowed programme performance to be visibly linked to individual patient care. This changed the engagement of staff with the data making it clinically meaningful to them, rather than a ‘mere’ exercise in reporting. In addition, healthcare providers perceived multidisciplinary QI meetings enable them to critically analysed the data and use data for informed planning to strengthen health systems.
Exploring Community Health Profiles as informational support to strengthen adolescent friendly health services in South Africa

Co-authors: Myrna van Pinxteren - University of Cape Town; Morna Cornell - University of Cape Town; Natalie Leon - Medical Research Council South Africa; Mark Lurie - Brown University, Providence; Christopher J Colvin - University of Cape Town

BACKGROUND

The roll-out of Adolescent and Youth Friendly Services (AYFS) as part of the Ideal Clinic Programme, is currently underway and aims to strengthen public health service delivery in South Africa. The objective is for health services to be more responsive to adolescent health needs, especially given the disproportionate burden of HIV amongst youth. One of the requirements for clinics to achieve this Youth Friendly status, is to provide evidence on the health of local youth in their communities. This demands health care workers (HCWs) to compile a Community Health Profile (CHP) to inform decisions about service delivery. CHPs are intended as a tool to identify the major socio-economic issues that impact the health of young people, and to describe the prevalence of illnesses with a focus on HIV, TB and STI's in this particularly vulnerable population.

METHODS

We used qualitative case study methods as part of a longitudinal ethnographic study to follow the development of CHPs as part of the AYFS over the course of six months in five different clinics in Cape Town. Participant observation, interviews and workshops with health care workers and health managers were all part of the data collection process.

RESULTS

Findings of this research suggest that the successful development of CHPs as part of strengthening Adolescent and Youth Friendly Services are hindered in several ways. Firstly, there is a lack of leadership and responsibility within individual clinics and HCWs are often not supported by their managers. Secondly, there is an apparent contradiction between the firm expectation for accreditation and the lack of guidance from local government and specially appointed NGO's. Thirdly, the (routine) health data that is needed to populate CHPs is often incomplete, outdated and inaccessible, making it increasingly difficult for HCWs to develop comprehensive CHPs.

CONCLUSIONS

This research demonstrates the different challenges HCWs face when drafting CHPs. In line with the targets for the Ideal Clinic Programme, CHPs can successfully evaluate the needs of adolescents in South Africa, but it is crucial to improve guidance and support at every level of the health system. This guidance should include new ways of accessing, coordinating and using (routine) health data. More broadly, the research reveals the importance of feasibility and usability of policy for clinicians and illustrates the politics of translating policy into practice.
Bart Vander Plaetse, FAIRMED
Abstract Id: 342

Leave no one behind: from slogan to real change.

Co-authors: Bart Vander Plaetse-FAIRMED; René Staeheli-FAIRMED; John Kurian George-FAIRMED India; Alphonse Um Boock-FAIRMED; Nayani Suriyarachchi -FAIRMED Sri Lanka; Nirmala Sharma-FAIRMED Nepal; Flore Agoum-FAIRMED Cameroun; Emmanuel Mbouem Mbeck-FAIRMED République Centrafricaine

Purpose

"Leave no one behind" (LNOB) is a nice sounding, cool and slick slogan with a dramatic paradigm shift at its core. FAIRMED has over a decade of real action on LNOB, in diverse settings in Africa and Asia. We use NTD’s as an entry point for engagement with the poorest and most vulnerable. The presentation will illustrate the concepts with actual examples, including a partnership with the indigenous people of the Forest – the Baka of East Cameroun.

Focus & significance for the sub-theme

Blunt Value-for-Money and quick impact thinking has left many of the poorest behind for too long. One has to make radical choices in working with and for the most vulnerable, discriminated and/or excluded people, and going beyond solutions that work for most poor people.

We need to take into account social determinants of health, and act on them[1]; and start working multi-sectorial in earnest.

Public health must be local[2] with strong collaboration with local stakeholders. Only then the needs of the vulnerable can be focused, and inequity tackled.

Inequity stems from local and global asymmetric power relationships, and leaving no one behind on the way to equal and fair changes in life often means we need to challenge the balance in these relationships.

Presence of NTD’s allows us to define which populations are suffering from inequity. Focusing on neglected populations, with a broad multi-sectorial analysis of needs and underlying determinants, allows us to design pertinent initiatives coupled with local innovations that impacts on livelihoods of those that are left behind. Decreasing the burden of NTD is an important litmus test for UHC[3], the broader SDG’s[4], and the usefulness of the slogan “Leave no one behind”.

For too long we have worked for the poor but had to see that the largest part of our efforts went to the richer quintiles (who indeed also have needs!). Now, the new paradigm shows us that by first serving the ones left behind for too long, will assure that we reach the high level goal.

Increasing levels of inequity mean that a participation and inclusion framework becomes more relevant to larger sections of the population.

Target audience.

Implementers of determinants of health and health system strengthening in areas of absolute poverty, “diseases of poverty” community, indigenous people & health

[3] https://doi.org/10.1371/journal.pntd.0005759
Andres I. Vecino-Ortiz, Universidad Javeriana - Johns Hopkins School of Public Health
Abstract Id: 326

A tax on Sugar Sweetened Beverages in Colombia: Estimating the impact on overweight and obesity prevalence.

Co-authors: Andres I. Vecino-Ortiz-Universidad Javeriana - Johns Hopkins School of Public Health; Daniel F. Arroyo-Ariza-Universidad de los Andes

Introduction

Sustainable Development Goals have stated a target of reducing premature deaths by one third by 2030. Therefore curbing overweight and obesity becomes key. More than half of the Colombian adults are overweight, 17% are obese, and diet is an important risk factor for NCD’s in Colombia. Therefore, fiscal policy options targeting the consumption of energy dense food are a fundamental step to address the prevention of NCD’s in Colombia. This paper attempts to contribute to the growing body of knowledge on sugar-sweetened beverages (SSB) taxes in middle-income countries, and to provide guidance to policymakers in the tax design.

Methods

Data for this study were obtained from two main sources. 1) The 2011 and 2014 National Living Standards Survey (ECV), and the 2010 Colombian National Nutrition Survey (ENSIN). Both are cross-sectional, multistage, clustered stratified surveys carried out in a representative sample of households in Colombia. ECV collects data on household characteristics, consumption, and socioeconomic variables. ENSIN collects data on socioeconomic characteristics, food consumption, weight and height.

Using the ECV data, and taking advantage of the regional heterogeneity in prices, we developed an Almost Ideal Demand System for bottled beverages (SSB and bottled water) to estimate the own-price and cross-price elasticities of SSB and bottled water.

After estimating the price-elasticities, we imputed those elasticities on the ENSIN survey to conduct a comparative risk assessment strategy simulating the effect that different tax scenarios would have on both higher- and lower-income individuals in Colombia.

Results

The own-price elasticities of demand for SSB were -0.818 and -1.082 for higher and lower income households, respectively. Cross-price elasticities for bottled water were 0.196 and 0.618 respectively for these same SES groups. The own-price elasticity was more negative (-1.602 vs. 0.793) for households with no access to drinking water at the household. Depending on the model and tax scenario, the estimated reductions in the overweight and obesity prevalence among lower income households ranged between 2.06-3.98 and 1.34-2.13 percentage points respectively in the first year. Higher income households did not have statistically significant reductions for either overweight or obesity with any tax scenario. Depending on the tax scenario, we estimate annual revenues from the tax between 186-914 million USD.

Conclusion

In this study, we provide evidence suggesting that the SSB tax reduces the overweight and obesity prevalence among lower-income households in Colombia, and discuss the potential distributional characteristics of this tax.
A health educational process with community in a Primary Health Care Project

Co-authors: LILLIANA 317 VILLA VELEZ-UNIVERSIDAD DE ANTIOQUIA

Background: Health education should be understood as a means for the exchange of information and the development of a critical vision of health problems and not as a simple process of data transmission. This style of education is not proposed in the traditional mechanistic sense as an instrument for political exercise, but a humanistic and political sense for emancipation. This project focuses on an educational process through a Primary Health Care project; it is developing in a suburban area of Colombia. The aim is to analyze the relationship between health education and research in the framework of a popular education experience.

Methods: There is a Community Based participatory Research as the basis to understand health in a framework of political, historical and social relationships. It is carried out through an educational program based on Popular Education from Latin-American perspective. It includes ethnographic techniques as interviews and participant observation during educational meetings.

Results and discussion: The popular education experience was a participatory process in which dialogue and problematization led every session in discussion. The participants feel free to express their problems, needs and difficulties with regard to health and sanitary conditions (the population is living in a precarious situation) and difficulties for accessing health care. During the process, participants were more aware of the social injustices that affect them and actions to improve their lives and reinforce social organization. Additionally, the project combined thematic research into the educational process because it is necessary to investigate the generating topics to design contents according to the needs of the population. It is a measure of warranty that education includes significative topics for participants. The community appreciates the participative educational process for their lives and has been found new opportunities as a way to improve organization and mobilization.

Conclusions: Health education is a way to improve people’s health, community-led and participatory governance, it is also important not just to achieve immediate health outcomes, but also in a mid-term to strengthening health systems and their accountability to the populations they serve. Education in this perspective offers a new opportunities and models for learning based on individuals.
Altaf Virani, National University of Singapore
Abstract Id: 3714

The Perils of Using Private Sector Instruments to Improve Public Sector Performance: A Critical Appraisal of Management Reforms in India's Public Hospitals

Co-authors: Altaf Virani-National University of Singapore; M. Ramesh-National University of Singapore; Zeger van der Wal-National University of Singapore

Policymakers are often faced with a tricky challenge. How do you improve the performance of public hospitals without compromising their social objectives? Governments in many countries have resorted to instruments originally incubated in the private sector, to resolve performance issues in public hospitals. While some of these involve the use of scientific management, others seek to replicate market conditions for inducing performance improvements through competition. However, public management literature suggests that there are inherent differences between public and private hospitals, arising from their unique institutional environments and the personal characteristics of those who work in them. Such differences make the indiscriminate adoption of private sector instruments potentially problematic, and might render some of them ineffective or counterproductive, unless due caution is exercised in policy design.

This paper proposes a conceptual framework to situate different performance strategies that have been typically used in public hospital reforms. Performance is affected through interactions between the institutional environments within which public healthcare providers operate, including their autonomy and the nature and strength of accountability mechanisms, and their personal orientation in terms of their ethos, values and motivations that determine how they respond to various instruments.

Using this framework, we highlight the challenges of instrument mismatch through an appraisal of recent public hospital reforms in India, and examine their potential effects on healthcare provision, based on what we know from existing research. We discuss three categories of reform interventions. Social Health Insurance (SHI) programs create fund generation opportunities for public hospitals and push them to leverage their autonomy to use these funds for making service improvements, in order to compete with private hospitals for more revenue. In contrast, quality assurance and accreditation programs use a target-based approach to drive improvements via intrinsic mechanisms such as team goal-setting, peer competition, commendation awards and recognition. A third method uses performance monitoring for bureaucratic supervision, and a traditional top-down command-and-control approach for improving performance through pressure from senior management.

We position these interventions against the proposed framework and draw the attention of policymakers and researchers to the opportunities, impediments and ramifications. We hypothesize which instruments are likely to be more successful in improving public hospitals, how they might be able to leverage both public and private sector competencies to build capacity, and what further reforms might be needed to ensure their performance is both effective and consistent with their social goals as public organizations.
Poster Abstracts

Dennis Waithaka, 1) KEMRI-Wellcome Trust Research Programme, Kilifi, Kenya
Abstract Id: 1338

DESCRIBING AND EVALUATING HEALTHCARE PRIORITY SETTING PRACTICES AT THE COUNTY LEVEL IN KENYA.

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Background: Priority setting has been recognised as a key determinant of success in healthcare delivery. However, healthcare priority setting research has focused at the macro (national), and micro (patient level), while there is a dearth of literature on meso-level (sub-national/regional) priority setting practices. In this study, we aimed to describe and evaluate healthcare priority setting practices at the county level in Kenya.

Methods: We used a qualitative case study approach to examine the budgeting and planning process in two counties in Kenya. We collected the data through in-depth interviews of senior managers, middle level managers, front-line managers and health partners (n=23), and document reviews. We applied a descriptive framework that considers priority setting practices to include: context, content, process and actors and an evaluative framework that considers both consequentialist and proceduralist conditions as important to the success of priority-setting processes.

Results: The budgeting and planning process in both counties was ad hoc rather than systematic, and characterized by misalignment and the dominance of informal considerations such as political interests in decision making. When evaluated against consequential conditions, efficiency and equity considerations were not incorporated in the budgeting and planning process. Stakeholders were more satisfied and understood the planning process compared to the budgeting process. There was a lack of shifting of priorities and unsatisfactory implementation of decisions. Against procedural conditions, the budgeting process was less inclusive, transparent and stakeholders were less empowered compared to the planning process. There was ineffective use of data, lack of provisions for appeal and revisions and, limited mechanisms for incorporating community values in the budgeting and planning.

Conclusion: County governments can improve the budgeting and planning process by aligning them, implementing a systematic priority setting process with explicit resource allocation criteria, and adhering to both consequential and procedural aspects of an ideal priority setting process. Strengthening these aspects will strengthen the performance of the Kenyan health system by improving efficiency, equity, and responsiveness of service delivery.
Levels and Determinants of Out-of-Pocket Health Expenditures in the Democratic Republic of the Congo, Namibia, and Rwanda

Co-authors: Wenjuan Wang-The DHS Program/ICF; Gheda Temsah-ICF

Background: Out-of-pocket spending on health care constitutes a significant portion of household expenditure in developing countries. This study explored levels and determinants of out-of-pocket health expenditures in three African countries—the Democratic Republic of the Congo (DRC), Namibia, and Rwanda—using nationally representative data from the Demographic and Health Surveys (DHS).

Methods: The study countries were selected based on the similarity in approaches for collecting data on healthcare costs in the most recent DHS survey. The main outcome of interest was out-of-pocket payments for healthcare services received (laboratory test, consultations, and drugs/medication) for the most recent visit. Explanatory variables at the individual, household, and community levels that may affect out-of-pocket spending were determined based on Anderson and Newman’s model of pre-disposing, enabling, and needing factors of health-care-seeking behavior. Two-part models were used to model out-of-pocket health spending.

Results: Use of inpatient care ranged from 4% (DRC) to 18% (Namibia) in the three study countries. Use of outpatient care was generally higher than inpatient care, ranging from 7% (DRC) to 41% (Namibia). Inpatient care was provided predominantly at public health facilities, while the use of private providers was more common for outpatient than inpatient services.

Absolute levels of out-of-pocket spending on healthcare received varied substantially across countries and were highly skewed to large amounts. The percentage of individuals receiving health care but not paying for it ranged from 3% in Rwanda to 18% in Namibia. Average cost of healthcare services was the highest in Namibia (constant 2010 USD $123 for inpatient and $18 for outpatient) and lowest in Rwanda (constant 2010 USD $23 for inpatient and $4 for outpatient). The average out-of-pocket expenditure for inpatient care in a public facility was half or less that of care from a private provider. Differences between public and private providers in health expenditures are less pronounced for outpatient than inpatient care.

Health insurance coverage stands out as an important factor affecting the magnitude of out-of-pocket expenditures in all countries, but the results are mixed. In DRC and Rwanda health insurance coverage was associated with lower out-of-pocket expenditures, while in Namibia it was associated with higher out-of-pocket payments. Poorer households generally spent less in absolute terms on out-of-pocket payments.

Conclusions: Out-of-pocket health expenditures vary substantially across countries. Our results suggest that expanding health insurance coverage, especially in DRC, where service use is low and out-of-pocket health expenditure is high, may be conducive to lower out-of-pocket health expenditures.
Setting the record straight. Social enterprises will thrive in a sympathetic health system.

Co-authors: Elizabeth Watson-Change Through Partnership (UK) Ltd

Background: Health system reforms which aim to achieve universal health coverage in low to middle income countries recognise that private health care providers may have a role in improving access to care, increasing capacity and capability. Social enterprises are, arguably, unique forms of organisation. There has been much debate in the literature and amongst practitioners about the meaning of the term social enterprise. A consensus is emerging that social enterprises can be distinguished from other types of organisations. They have three core characteristics. These are that they make a financial surplus from trade, reinvesting their profits from social entrepreneurial actions to achieve a social purpose. There is growing evidence that government policy and health systems design influences social entrepreneurial action.

Methodology: This paper presents findings from qualitative primary research. A case study design methodology was used in two contrasting health systems. 17 health system policy makers, influencers and social entrepreneurs leading health care organisations were interviewed in Tanzania and 20 interviews were held in England. Data were also collected from documents and websites. Data were analysed using grounded and content analytical procedures.

Results demonstrate how not for profit health care organisations in Tanzania are building social entrepreneurial capabilities and capacity to engage with an emerging market in health services. There was a clear alignment of organisations’ social purpose with at least one of the social determinants of health. Further, the organisational strategies and business models developed by these social entrepreneurs demonstrated four types of social innovation. These included new products or services which were not there before, new processes to deliver services, shifting market positions or evolving paradigms.

Discussion/conclusion: Evidence from this research demonstrates that health system design (including health service market design) enables or inhibits the degree to which social entrepreneurs can express innovation. Social enterprises present a unique opportunity for policy makers and social entrepreneurs to offer innovative care models and achieve social value. Social entrepreneurs’ opportunities to innovate depend as much on how the health system is designed as on their organisational capabilities and capacity. Recognising the value of social entrepreneurship in public sector reforms offers policy makers an opportunity for large-scale and sustainable transformation of health care services. Health systems policy actors therefore have an opportunity to build on the characteristics of social enterprise to strengthen health systems, to contribute to achieving universal health coverage and address the social determinants of health.
Nimali Widnapathirana, Ministry of Health, Nutrition and Indigenous Medicine
Abstract Id: 3948

Unmet healthcare needs in an adult population in Sri Lanka: its prevalence and correlates


Background

Sri Lanka ensures universal access to healthcare through the provision of health services free at the point of delivery by an island wide network of hospitals which are publicly funded through general taxation. Most of hospitalizations take place in government sector institutions whereas outpatient care is shared equally between the public and private sectors. The out-of-pocket expenditure for health was 40% in 2013. It is important to assess the unmet needs in a publicly funded health system to understand barriers to access. This study aimed at exploring the prevalence and factors associated with self-reported unmet needs in an adult population in a district of Sri Lanka.

Methods

A cross sectional descriptive study was conducted among adults aged 40-69 years in the second highest populated district in the country. Data were gathered using an interviewer administered questionnaire from 2345 households which asked for unmet needs for medical care (examinations and treatment) and medicines within the preceding 12 months of the survey. Data were analyzed using univariate and multivariate methods to identify factors contributing to unmet need.

Results

The prevalence of unmet need for medical care was 12% and for medicines 7%. The most cited reason for unmet need was the inability to afford care. The sex of the person, having an insurance, presence of a chronic illness, being the household head, education level, education level of the head of the household, having an income and perceived health status were significantly associated with both types of unmet need and being above the retirement age was additionally associated with unmet need for medical care (p<0.05%). In the multivariate analysis, being above 60 years, perceived good health status, having an income and having an insurance were negatively associated with unmet need for medical care and the presence of chronic illness was positively related whilst unmet need for medicines, in addition, was negatively associated with education level and not significantly associated with the insurance status or having an income.

Conclusion

Although, prevalence of unmet need is considerable it is good to note that the elderly population has less unmet needs which is important for Sri Lanka as the population is rapidly aging. The likelihood of people with chronic illness reporting more unmet needs warrant further exploration as unmet needs could result in increased health and socio-economic burden for the individuals and the society.
Sophie Witter, Queen Margaret University Edinburgh  
Abstract Id: 859

**Leave no one behind – operationalising universal health coverage and social protection in Agenda 2030**

Co-authors: Sophie Witter-Queen Margaret University Edinburgh; Ludovico Carraro-Oxford Policy Management; Nouria Brikci-Oxford Policy Management; Tim Ensor-University of Leeds; Sebastian Silva-Leander-Oxford Policy Management; Marta Marzi-Oxford Policy Management; Firdaus Shidieq-Oxford Policy Management; Laura Bates-University of Leeds; Roosa Jolkkonen-University of Oxford; Snehashish Raichowdhury-Oxford Policy Management; Rakesh Chandra-Oxford Policy Management

**Background**

While the literature on UHC is large, relatively little attention has been paid to how equity is conceptualised, managed and measured as countries move along the road to UHC; how trade-offs are managed; what drives these choices; and how social protection policies and UHC policies are articulated to promote equity. These questions form the core of this study.

**Methods**

The study is based on four research stages: a global literature review; an expert meeting; a data analysis component looking at patterns and trends in UHC and equity over the past two decades; and in-depth case studies conducted in five focal countries (Ghana, Burkina Faso, India, Indonesia and Kyrgyzstan). These case studies investigate country journeys in more detail, and included key informant interviews (84 in total), data analysis and national document reviews.

**Results**

Some of the top-line findings of this study include that: Countries have made a commitment to UHC over the past two decades and this is reflected in progress in reducing inequalities in access to healthcare. Equity is implicit within the UHC focus, but equity goals and trade-offs are rarely made explicit or publicly debated at country level. UHC and social protection share focal objectives but policies are typically articulated independently. Although there is no ‘one path’ to UHC, there appears to be some convergence around core design issues. All UHC reform trajectories are driven by the political economy of the local context and are subject to path dependencies. Many UHC policies have focused on financial entitlements of population groups without a matching emphasis on the equitable availability and quality of healthcare supply. Contrary to WHO recommendations on ‘fair choices’, ensuring that the core package of care is cost-effective appears to be neglected in many countries. Despite primary care systems being recognised as a cornerstone of UHC and equity, the resource flows in many settings do not reflect this. The financial commitment to health has been too limited to support equitable UHC in some settings. Monitoring of equitable UHC and leaving no one behind remains hampered by lack of disaggregated data and poor quality of care tracking.

**Conclusions**

Our framework highlights the importance of policy choices outside the health sector, including in relation to poverty reduction and social protection, as well as assessing financial contributions, resource allocation decisions, quality of care, health outcomes, and inter-temporal choices, in addition to trade-offs within and between the dimensions of WHO’s ‘cube’.
Can health insurance improve individuals' health? Results from China's Basic Medical Insurance Scheme for Urban Residents

Co-authors: Jingxian Wu-Xi'an Jiaotong University ; Ying Mao-Xi'an Jiaotong University

Background: With the establishment and improvement of the Basic Medical Insurance Scheme for Urban Residents (URBMIS), China has achieved universal coverage of social health insurance in 2013. However, less research has been carried out for evaluating the effect of social health insurance on population’s health. This paper aims at answering the question that whether health insurance improves individuals’ health based on empirical evidence from URBMIS. Methods: The data for this study came from a tracking household investigation in sample city of Shaanxi Province, China, from 2009 to 2013. We chose the score of self-rated health (SRH) (0-100) as health status indicator and also dependent variable, whether or not insured by URBMIS as treatment variable, and demographic factors, socioeconomic factors, illness status and healthcare service utilization as independent variables. We employed the methods of Propensity Score Match and Difference-In-Difference to evaluate the performance of URBMIS on improving people’s health. Individuals in controlled group were those urban residents who didn't participated in any health insurance scheme either in 2009 or in 2013. Individuals in treatment group were those who did not participate in any health insurance in 2009 while participated in URBMIS in 2013. Multiple regression analysis was also adopted to explore the explanation mechanism of the benefited residents. Results: In initial state (i.e. in 2009), the score of SRH of treatment group was 1.814 higher than that of controlled group (p=0.702) in average. After the implementation of URBMIS, the score of SRH of treatment group was 11.633 higher than that of controlled group (p=0.363) in 2013. In other words, residents who were insured by URBMIS showed a higher score difference of 9.820 than residents who were not (p=0.472). In terms of different subgroups of urban residents, those of bad health status, in elder age, and of lower income had a significantly increase of SRH of 7.540, 8.952 and 6.981 (p<0.01) after participating in URBMIS, while those of good health, in younger age, and of higher income did not. We also found that participating in URBMIS increased the utilization of healthcare service, especially in-patient service, for residents who were of bad health or socioeconomic status. Conclusion: URBMIS did not improve the health status of overall residents while markedly improved the health level of groups who are vulnerable and of low socioeconomic status. URBMIS promotes the healthcare services utilization of vulnerable groups, thus improving their health.
Madhusudan Yadav, National Health Systems Resource Centre
Abstract Id: 2858

**Pain, Policy and Parliament: An Analysis of Palliative Care in India**

Co-authors: Madhusudan Yadav-National Health Systems Resource Centre; Sowmya Thota-National Health Systems Resource Centre; Nobhojit Roy-National Health Systems Resource Centre

**Background:**

WHO estimates that worldwide about 40 million people need palliative care each year. 78% of this population resides in low and middle income countries. Globally, only about 14% of palliative care need is met.

**Methods:**

We estimated the need for palliative care, both during and at end of life, for India and its 36 States and Union Territories. Global Burden of Disease 2016 and WHO Framework for estimation of palliative care burden was used to arrive at these numbers. We also performed a qualitative analysis on all parliamentary questions (n= 682) between 2009 to 2017 that required an oral reply from the Minister of Health and Family Welfare, in the Lower House (Lok Sabha) of Indian Parliament.

**Results:**

In India, in 2016, over 5.5 million (5,587,543) people died from diseases requiring palliative care. We estimate the total number of people in need palliative care, before and at the end of their life, to be 7.5 million (7,524,633). Five States- Uttar Pradesh (16%), Maharashtra (10%), West Bengal (9%), Tamil Nadu and Bihar (7% each) – represent 50% (3.6 million people) of the total palliative care need. However, in the state of Uttar Pradesh, the National Program for Palliative Care is operational in only 10 districts (of the total 75 districts). Similarly, in Maharashtra the program is operational in 8 (out of total 36) districts. ‘Pain’ is not high on the political agenda too. Typically, parliamentary questions probed cancer (n=24) and aspects related to its prevalence, registries, care infrastructure, financial protection mechanisms, access to and price of cancer drugs. None, however, highlighted the need of mitigating the ‘pain’, especially in terminal stages. Only one question on palliative care was posed in the Lower House of Parliament of India in last nine years.

**Discussion:**

The shift towards Comprehensive Primary Care in India is an opportunity to highlight the unmet need of palliative care. Mechanisms on providing palliative care through network of peripheral Health Centres, including the newly envisaged Health and Wellness Centres, could help in scaling up the National Program for Palliative Care. Cancer related queries have been more frequently asked in the Indian Parliament when compared to questions on palliative care. Civil society, academia and implementers could perhaps use the need in Cancer patients as a starting point to sensitize political representatives on the unmet need of palliative care and related issues- such as access to opioids.
Poor quality of antenatal and family planning services in Ethiopia

Background: Quality of primary health care is a determinant factor of service utilization and potential health gain from using the services. However, it is not always in sufficient supply. Similarly, Ethiopia has achieved a remarkable improvement on family planning (FP) and antenatal care (ANC) in the past decades although poor quality of these services remains a challenge. This study was conducted to assess the quality of FP and ANC services and their distribution across different regions of Ethiopia.

Methods: Secondary analyses using the Ethiopia Service Provisions Assessment Plus Survey 2014 (SPA+) data and Ethiopia Demographic and Health Survey (DHS) 2016 data were conducted with STATA. Technical quality indices were created; and were used to adjust crude coverage of ANC and FP services.

Results: 1,902 and 1,265 women were observed during ANC and FP visits respectively in 516 health facilities. 48.5% and 43.9% of the women were observed in hospitals and health centers respectively, and the rest (7.6%) in health posts and clinics. The technical quality score of FP 33.6% that is, on average, only 1/3 of the mothers obtained the recommended clinical actions of a FP visit. The average FP visit technical quality score was low and did not vary considerably by either who owns the facility (public, private, NGO, etc.) (scores ranged from 28.2% to 37.3%) or facility type (scores ranged from 26.5% to 35.1%). The national average of effective coverage of FP services was 20.4%, ranging from 33.6% in Addis Ababa to 3.1% in Ethiopia-Somali region. Regarding, first ANC services, only 36.9% of pregnant women had the recommended clinical actions of first ANC. ANC technical quality score was low by who owns the facility i.e. scores ranged from 34.3%, 37.1% and 39.9% for private for profit, public and NGO respectively. The mean EC of ANC services was 18.5%, ranging from 8.8% in Gambella to 33.5% in Tigray regions of Ethiopia.

Conclusion: The quality of both FP and ANC services is very low in Ethiopia with women obtaining only a low fraction of the recommended clinical actions during their visits, and were not benefiting enough from visiting health care providers in the health facilities. In addition, there is considerable variation in EC across Ethiopian regions. Additional research is needed to understand the reasons for staff non-adherence to recommended clinical guidelines. Actions are needed to improve low coverage and poor technical quality of ANC and FP visits.
Chaturangi Yapa, Australian National University
Abstract Id: 3896

Systematic review of primary health care interventions in complex humanitarian emergencies

Co-authors: Chaturangi Maheshi Yapa-Australian National University; Cathy Banwell-Australian National University; Kamalini Lokuge-Australian National University

Background: Today, more people than ever are affected by humanitarian crises caused by conflict and natural disasters. In these complex emergencies, despite health care being predominantly accessed at the primary health care (PHC) level, there is limited evidence on how PHC services are best delivered. The aim of our narrative review is to synthesise the literature on primary health care interventions in complex emergencies since the Alma Ata Declaration.

Methods: We conducted a systematic review of the published literature by searching Medline, Web of Science, Proquest, Scopus, the Cochrane and WHO libraries and searched the reference list of included studies. We included articles of primary health care interventions carried out by national and international service providers in humanitarian crisis settings between 1978 and 2016. We assessed the mode of delivery of interventions and identified key themes in service delivery.

Results: Twenty-one studies met the inclusion criteria for this review, with an average of four articles published every decade since the 1980s. Seventeen studies looked at PHC interventions in protracted conflict settings, none in acute conflict settings and four in natural disaster settings. Health care is predominantly delivered via mobile clinics in natural disasters and fixed clinics in protracted conflicts. Four studies considered the health impacts of their interventions. We identified these key themes from studies: unsystematic approach to service implementation, poor coordination with local authorities and other sectors, lack of planning regarding continuity of care and community engagement was not considered in any intervention.

Discussion: Considering the major increase in health-related humanitarian activities over the last three decades and the volume of services provided at the primary health care level, the evidence base on primary health care interventions in humanitarian crises is significantly lacking. The changing nature of the humanitarian landscape and the increasingly complex health care needs of people affected by humanitarian crises requires multi-sectoral action, best delivered at the primary health care level. The humanitarian sector needs to engage in discussion and re-focus efforts on ensuring that the most vulnerable populations have access to the most basic level of health care.
Patients Pathways to Tuberculosis Diagnosis and Treatment in a Fragmented Health System: A Qualitative Study from a South Indian district

Co-authors: Vijayashree Holalkere Yellappa-ICMR; Pierre Lefèvre-Institute of Tropical Medicine; Tullia Battaglioli-Institute of Tropical Medicine; Narayanan Devadasan-IPH; Patrick Van der Stuyft -Institute of Tropical Medicine

Objectives: India’s Revised National Tuberculosis (TB) Control Programme (RNTCP) offers free TB diagnosis and treatment. But more than 50% of TB patients seek care from private practitioners (PPs), where TB is managed sub-optimally. In India, there is dearth of studies capturing experiences of TB patients when they navigate through health system to seek care. Also, there is less information available on how PPs make decisions to refer TB cases to RNTCP. We conducted this study to understand the factors influencing patient’s therapeutic itineraries to RNTCP and PP’s cross referral practices linked to RNTCP.

Design: We conducted in-depth interviews on a purposive sample of 33 TB patients and 38 PPs. Patients were categorised into three groups: those who reached RNTCP directly, those who were referred by PPs to RNTCP and patients taking DOTS from PPs. We assessed experiences of patients in each category and documented their journey from the start of initial symptoms to until they reached RNTCP and started on treatment. PPs were categorised into three groups based on their TB case referrals to RNTCP: actively-referring, minimally-referring and non-referring.

Results: Patients had limited awareness about TB. Patients switched from one provider to the other, since their symptoms were not relieved. A first group of patients, self-medicated by purchasing medicines from private chemists for a long period, before seeking care. A second group sought care from government facilities and had simple itineraries. A third group, who sought care from PPs, switched concurrently and/or iteratively from public and private providers in search for relief of symptoms causing important diagnostic delays. Eventually all patients reached RNTCP and were started on treatment. PP’s cross-referral practices were influenced by patient’s paying capacity, familiarity with RNTCP, kickbacks from private labs and chemists, and in some cases, to get rid of TB patients. These trade-offs by PPs complicated patient’s itineraries to RNTCP.

Conclusions: India aims to achieve universal health care for TB. Our study findings will help RNTCP to develop initiatives to ease patient pathways to TB care and develop strategies for integrating and strengthening effective referral systems from PPs to RNTCP.
Linda Yevoo, Research & Development Division, Ghana Health Service, Dodowa Health Research Unit
Abstract Id: 1523

**Adherence or not to Postnatal Care Protocols as Midwives’ Coping behaviour to Manage Constraints and Avoidance of ‘Risks’ in Two Hospitals in Southern Ghana**

Co-authors: Linda Lucy Yevoo-Research & Development Division, Ghana Health Service, Dodowa Health Research Unit; Irene Akua Agyepong-Research & Development Division, Ghana Health Service, Dodowa Health Research Centre; Trudie Gerrits-University of Amsterdam, Amsterdam- Netherlands; Han van Dijk-Wageningen University, Wageningen- Netherlands

**Background:** Leaving no one behind is often conceptualized in terms of numbers. Much emphasis is put on increasing access to care and measuring coverage. However access to sub-optimal quality care is also a way of leaving people behind to which less attention is paid. Caregivers adherence or otherwise to clinical decision-making and management protocols can affect quality of postnatal care (PNC). This study explored public sector PNC midwives’ decisions to adhere (or not) to the PNC protocols, explanations for their decisions and the influence on quality of care provided.

**Methods:** We conducted an ethnographic study of postnatal care (PNC) midwives’ adherence or not to national PNC decision-making protocols in two public hospitals in Southern Ghana. Data collection was done using participant observations, conversations and group interviews over a 20-month period. The Ghana Health Service Ethical Review Committee approved the study. Data was analysed using a grounded theory approach.

**Findings:** In both hospitals, midwives collectively rather than individually decided when to conform to, modify or totally ignore the national PNC protocol. They often adhered when the required resources for adherence were available and believed that not adhering would lead to punishment. Protocol modifications and ignoring occurred when the midwives perceived that adherence would have negative privacy implications for their clients and when they could be seen as acting ‘unprofessionally’ towards their clients. This also occurred when basic supplies, logistics and healthcare infrastructure needed for adherence were unavailable, viewed as inappropriate for the recommended tasks. As the midwives had concerns that these resource constraints could expose themselves and patients to health, emotional, financial and social harms. The ignoring and modifying of the national PNC protocols practices, in many instances led to the provision of suboptimal quality of care.

**Discussions and recommendation:** The midwives’ practices are coping behaviours to address the difficulties they sometimes faced in how to strictly implement the national PNC protocol’s recommendations in a context of healthcare resources availability challenges, and sometimes inadequate risk protection for themselves and their clients. Creating a more conducive working environment and addressing challenges with adequacy of resources such as essential equipment, infrastructure, tools and supplies can improve protocol adherence, quality care and ensure better maternal and neonatal health outcomes. Ethnographic methodologies are crucial to unravel subtle but critical factors that may facilitate or hinder advancing health systems in the sustainable development goals era, that other research methods may not identify.
rends in disparities in allocation of health care resources for public health institutions in LIAONING province from 2005 to 2015

Co-authors: Meng Qing Yue-Shandong University; Jiang Xiao Feng-Shandong University; Li Hong Min-Shandong University; Song Su Hang-Peking University; Xu jin jin -Peking University; wang shu ping-Shandong University

Background: Healthcare access is recognized as a fundamental human right, and the distribution of a healthcare delivery system is an important component of healthcare access. Equity is one of the major goals of China’s recent health system reform. This study aimed to evaluate the trends in disparities in the distribution of health resources (health technicians and beds) for the different kinds of health institutions from 2005 to 2015.

Methods: Data of this study were drawn from the annual financial report between 2005 to 2015. We calculated concentration index (CI) and Gini coefficients for the indicators: per capital health technicians and beds.

Results: The study found a steady rise in the total amount of health resources and per capita health resources of different kinds of institutions in Liaoning province. The CI values of health technicians and beds to the third hospitals were high (ranging from 0.285 to 0.590), showing an increase trend to 0.553 and 0.590 respectively in 2009, following a decrease trend to 0.473 and 0.448 in 2015. The CI values of health technicians and beds to second hospitals, ranged from 0.107 to 0.138. The CI values of health technicians and beds to the primary healthcare institutions were small (ranging from -0.001 to 0.116). From 2005 to 2015 the Gini coefficients against population size ranged between 0.259 and 0.617 in the number of health technicians in the third hospitals, 0.261-0.290 in second hospitals, and 0.224-0.236 in the primary care institutions. The Gini coefficients against population size ranged between 0.503-0.620 for the number of beds in the third hospitals, 0.278-0.313 in second hospitals, and 0.287-0.340 in the primary care institutions.

Conclusion: The amount of health resources in Liaoning province showed a state of steady increase from 2005 to 2015. Overall, according to the analysis of CI, the equity of beds allocation decreased before the new health reform and improved gradually after the reform, while the disparity of health technicians showed an overall increase trend. For GINI index, during the period, the value of GINI index of health technicians and beds showed a decrease trend, which indicated that the equity of health resource improved gradually. The trend of health resource allocation for different kinds of health institutions showed different changes during this period.

Therefore, policies to achieve equality in the allocation of public healthcare resources should be instituted. The investment of government should be directed for the poorer areas.
Impact of Universal Health Coverage on the Management of Diabetes Mellitus in Northeastern Thailand

Co-authors: Sojib Bin Zaman-International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b); Pattara Sanchaisuriya-Khon Kaen University, Khon Kaen, Thailand

Introduction

Thailand has successfully achieved universal health coverage (UHC) in April 2002 with the implementation of three different insurance schemes: Civil Service Medical Benefits Scheme (CSMBS), Social Security Scheme (SSS) and Universal Coverage Scheme (UCS). UHC are running for last decade and most of the patients are insured under any one of the three schemes. However, provision of equal care to all the patients is a significant challenge in Thailand under the Universal health care. Moreover, Thailand has recently experienced increased prevalence of diabetes mellitus (DM) which caused 6-10% of all deaths. However, the effects of different levels of UHC schemes on diabetes management is largely unknown. The study aimed to investigate impact of different insurance schemes of UHC in managing diabetes mellitus.

Methods

This study uses data which was collected from a clinical registry of 5225 diabetic patients attending a large secondary level hospital in northeastern Thailand between January 1, 2015 and December 30, 2015. The hospital is operated by Ministry of public Health and cost of the diabetes care is covered substantially by UHC. Three distinct sources were used to obtain information: hospital case records, demographic information from the patient’s health card and investigation reports. This study used multiple logistic regression to determine the likelihood of the association.

Results

Majority of the participants were female (64%), aged more than 60 years (56%), farmers (60%), and overweight (40%). About two fifths of patients (38%) showed glycaemic control while majority of them (62%) had poorly controlled glycaemic status. Poor glycaemic control was more prevalent (83.5%) among the UCS beneficiaries as compared to CSMBS (11.0%) and SSS (5.5%). In multivariate analysis, beneficiaries who received diabetic care under the scheme of CSMBS (Adjusted Odds Ratio, AOR: 0.82, 95% CI: 0.69-0.98) and SSS (AOR: 0.82, 95% CI: 0.69-0.98) had better glycaemic control when compared with UCS beneficiaries.

Discussion and Conclusions

Study results show that a vast majority of Thai patients with DM had uncontrolled glycemic status indicating that the healthcare system might not be efficient in providing proper diabetic management. While Thailand has ensured financial protection to cover its broad population, measures to improve diabetes management remains a challenge. Difference in benefit packages might highlight the inequality among different UHC schemes in diabetes mellitus management. Further comparative analysis is warranted to explain the differences in DM management which will, in turn, help to identify the optimum scheme.
Collins Zamawe, Ministry of Health Mulanje District Hospital
Abstract Id: 607

The Role of Community-Driven Mass Media Campaign in Improving Access to Maternal Health Care services in Rural Malawi

Co-authors: Collins Zamawe-Ministry of Health Mulanje District Hospital

Background
Mass media plays an important role in disseminating public health information, improving health knowledge and increasing access to health care. However, the effects of mass media public health interventions have been inconsistent, largely because most of them do not sufficiently engage the local people or community members. As such, little is known about the effects of locally instigated mass media promotion. The aim of this study was to examine the impact of a mass media campaign called Phukusi la Moyo (tips of life), which was initiated and spearheaded by the community members, on the utilisation of maternal health care services.

Methods
A community-based cross-sectional study involving 3825 women of reproductive age (15–49 years) was conducted in rural Malawi to evaluate the Phukusi la Moyo (PLM) campaign. To do this, we compared the utilisation of maternal health care services between women who were exposed to the PLM campaign and those who were not. Respondents were identified using a multistage cluster sampling method. This involved systematically selecting communities (clusters), households and respondents. Associations were examined using Pearson chi square test and a multivariable logistic regression model.

Results
The likelihood of using contraceptives (AOR = 1.61; 95 % CI = 1.32–1.96), sleeping under mosquito bed-nets (AOR = 1.65; 95 % CI = 1.39–1.97), utilising antenatal care services (AOR = 2.62; 95 % CI = 1.45–4.73) and utilising postnatal care services (AOR = 1.59; CI = 1.29–1.95) were significantly higher among women who had exposure to the PLM campaign than those who did not. No significant association was found between health facility delivery and exposure to the PLM campaign.

Conclusions
Women exposed to a community driven mass media campaign in rural Malawi were more likely to utilise maternal health care services than their unexposed counterparts. Since, the use of maternal health care services reduces the risk of maternal morbidity and mortality, community-led mass media could play a significant role towards improving maternal health outcomes in low-and-middle-income countries. The use of locally driven mass media in disseminating public health information in low-income countries is recommended. The findings further illustrate the importance of engaging community members to improve access to health care and thereby achieve universal health coverage in limited resource settings.
Utilization of health care and burden of out-of-pocket health expenditure in Zimbabwe: Results from a national household survey

Wu Zeng, Brandeis University
Abstract Id: 3158

Utilization of health care and burden of out-of-pocket health expenditure in Zimbabwe: Results from a national household survey

Co-authors: Wu Zeng-Brandeis University; Laurence Lannes-The World Bank; Ronald Mutasa-The World Bank

Background: With development partners’ support, Zimbabwe has undertaken substantial changes and implemented new initiatives to improve health system performance and services delivery, including results based financing in rural health facilities and health facilities in low-income urban areas. This study aims to explore the utilization of health services and level of financial protection of Zimbabwe’s health system.

Methods: Using a multistage random sampling approach, 7,135 households with a total of 32,294 individuals were surveyed in 2015 on utilization of health services, out-of-pocket (OOP) health expenditure, and household consumption. An equity analysis of utilization of both inpatient and outpatient health services for both inpatient and outpatient care was conducted. Using a cut-off of 25% of total consumption, the incidence of catastrophic health expenditure (CHE) was estimated. A logistic regression was used to examine determinants of the CHE.

Results: Outpatient care was sought by 18.5% of the population during the four weeks preceding the interview, and 2.48% of the population (783 individuals) reported being hospitalized during the 12 months preceding the survey, with 0.03 admissions per capita per year. Although the outpatient visits is favorable to the poor groups, the poor was less accessible to the inpatient care. The richest group had 71.4% higher inpatient admissions than the poorest group. Zimbabwe spent approximately 103.8 USD per capita on health in 2015, and almost one quarter of health expenditures came from household OOP payments. The incidence of the CHE was estimated at 7.6% of households. The poor suffered most from the OOP health payment, with the incidence of CHE of 13.4% in comparison with 2.8% in the richest group. The OOP health spending resulted in additional 1.29% of households falling into poverty. Household consumption, type of care (inpatient or outpatient care), and age of individuals were the major determinants of CHE.

Discussion: The study suggests that there exists inequality in using health services among different consumption groups, particularly on inpatient health care. The poor population that seeking inpatient care are the most vulnerable population incurring CHE. A targeting approach to such a population could further strengthen the financial risk protection function of Zimbabwe’s health system.
LINGRUI LIU, Department of Global Health and Population, Harvard T.H. Chan School of Public Health, Boston, MA, USA

Abstract Id: 1527

The health and financial benefits for households from averting malaria with RTS,S/AS01 vaccine in Zambia: an extended cost-effectiveness analysis

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Objective: Malaria remains one of the leading causes of mortality for children under five years-old in many sub-Saharan African countries. We examined the household health and financial benefits associated with the hypothetical rollout of the malaria vaccine RTS,S/AS01 in Zambia.

Methods: We applied extended cost-effectiveness analysis methods to estimate the impact of the RTS,S/AS01 vaccine on the health of children under five, as well as the financial impact on their households. We assumed: 54% and 31% vaccine efficacy against mild and severe malaria cases, respectively; 68% average vaccination coverage; and vaccine cost of US$5 per dose. To assess vaccine impact, we computed for each income quintile: the number of malaria deaths prevented for children under five; the total household out-of-pocket (OOP) malaria treatment expenditures averted; and the number of cases of catastrophic health expenditure averted.

Results: Rolling out the RTS,S/AS01 vaccine in Zambia within one birth cohort would avert an estimated 2700 deaths of children under five, and prevent approximately US$3 million of household OOP expenditure, both largely concentrated among the poorer households. Vaccination would also prevent 55,000 associated cases of catastrophic health expenditure among households in the lowest income quintile. The estimated cost of the program would be US$8 million per birth cohort.

Conclusions: Estimated benefits of malaria vaccination would outweigh program costs. In addition to significant health impact (i.e. malaria deaths averted), a national vaccination program would yield large reductions in malaria-related OOP expenditures and decrease cases of catastrophic expenditure among poor households.
Dietary diversity and associated factors among children aged 6–23 months in Sinan Woreda, Northwest Ethiopia

Background: Child malnutrition accounted by poor dietary diversity is common in developing countries contributing for child morbidity and mortality. It also has an impact on child growth and development. Almost all nutritional related problems are preventable by implementing infant and child feeding strategies. The first two years of life are particularly important to reverse the nutritional problems by achieving dietary diversity feeding.

Objective: The study aimed to assess dietary diversity and its associated factors among 6–23 months old children in Sinan Woreda, Northwest Ethiopia.

Methods: We conducted community based cross-sectional study among children aged 6-23 months in Sinan Woreda from February 16 to March 10, 2016. Random sampling technique was used to select 740 samples. Data on children’s dietary diversity of the last 24 hours were collected through interview of mothers. Data were entered into EpiData version 3.1 and analysis was performed using SPSS version 20. The bivariate and multivariable logistic regression analyses were done to identify the independent factors associated with sub-optimal dietary diversity among children aged 6-23 months.

Results: Seven hundred thirty six samples were included in the analysis with the response rate of 99%. Optimum dietary diversity was observed in 13% children. The dominant food groups consumed were grains. Availability of media sources at household [Adjusted Odds Ratio (AOR)=2.77 (1.65-4.68)], availability of cow milk in the household [AOR=2.39 (1.31-4.35)], women’s involvement in decision-making at household level [AOR=2.07 (1.02-4.20)], institutional delivery service utilization [AOR=2.40 (1.24-4.67)], receiving assisted delivery service [AOR=2.36 (1.12-4.98)], receiving postnatal care [AOR=2.07 (1.18-3.63)], distance far from the health center [AOR=3.11 (1.66-5.83)] and meal frequency being four and above [AOR=3.31 (1.53-7.18)] were associated with dietary diversity.

Conclusion: This study concluded that optimum dietary diversity among children aged 6-23 months in Sinan Woreda is low. Women involvement at household decision making improves dietary diversity of children. Ensuring maternal health service utilization can contribute for better dietary diversity of children aged 6-23 months. Large scale an interventional based research has to be conducted.
Bradley Chen, National Yang-Ming University
Abstract Id: 979

**Closing the Palliative Care Abyss in Universal Health Coverage with Provider Incentives: Lessons from Taiwan**

Co-authors:

Background: The access abyss for palliative care is a global crisis, even in countries with universal health coverage, where patients with non-cancer terminal illnesses, such as end-stage renal disease (ESRD), often undergo unnecessary and intensive health services. Objectives: In 2009, Taiwan's National Health Insurance issued a new payment policy to reimburse providers for hospice care provided to ESRD patients, which was previously limited to cancer patients only. This study evaluates the policy impact on end-of-life (EOL) costs for ESRD patients. Methods: This study employed a difference-in-differences analysis using a Generalized Linear Model. A cohort of 151,509 patients with ESRD or cancer aged 65 years or older who died between 2005 and 2012 in the Taiwanese National Health Insurance Research Database were sampled. The main outcome is inpatient expenditures in the last 30 days of life. In addition, we also examined the change in use of specific intensive services, such as ICU admission, surgical interventions and mechanical intubation. Results: EOL costs are higher for ESRD—1.88 times higher than those for cancer. Even as EOL costs are declining over time in general, expanding hospice care benefits to ESRD patients is associated with an additional reduction of 7.3% per decedent, holding constant patient and provider characteristics. The cost savings was larger among older patients-among those who died at 80 years of age or higher, the cost reduction was 9.8%. Conclusions: By expanding hospice care benefits through a provider reimbursement policy, significant costs at the end of life were saved and the quality of care for these vulnerable patients were improved.
Family Planning During Ebola: Perspectives on access and provision in Sierra Leone

Co-authors: Gillian McKay-London School of Hygiene and Tropical Medicine; Heidi Larson-London School of Hygiene and Tropical Medicine; Shelley Lees-London School of Hygiene and Tropical Medicine

Background: The difficulties of implementing Family Planning (FP) services in humanitarian crises have been documented in conflict, natural disaster and displacement contexts. However, there is a research and literature gap on this problem in disease outbreaks. The 2013-16 Ebola outbreak in West Africa increased mortality not only from Ebola, but also from decreased health service provision and utilization, including of maternal health services.

In 2014, Marie Stopes Sierra Leone reported FP service utilization had decreased by up to 95%. Many clinics and outreach services were closed on direction of national and international policy-makers.

Aim: To analyse FP policy and services in Sierra Leone during the Ebola outbreak to identify how future responses could better maintain FP access and utilization.

Methods: Data collection was conducted in urban and rural Kambia district and in Freetown between February and September 2018. We conducted: 1) clinical observations of FP services; 2) in-depth interviews and focus-group discussions with 30 FP health care workers (HCWs), 30 FP service-users and 10 district and national stakeholders. Key discussion topics were related to the barriers and facilitators of providing or accessing FP services, to identify policy recommendations to ensure services in future outbreaks could be made more resilient. Our analysis utilized socio-ecological and health systems theories to understand FP service access and provision in outbreaks. Analysis also focused on the service-user and HCW interaction in the Ebola “Avoid Body Contact” environment using an anthropological approach drawing on Techniques of the body, Habitus and Biopower. Recommendations were developed using theories of policy influence relevant to low-income contexts.

Results: In urban Kambia, service-users reported being afraid to seek care from HCWs who were perceived to be sources of infection. However, several service-users report that they did get FP, including by procuring injectable contraception privately and paying a HCW to inject it. HCWs reported delays in provision of personal protective equipment and risk allowance payments, but largely continued to provide FP when women requested services. The “Avoid Body Contact” policy was praised by service-users and HCWs and provided gloves were worn the policy was not seen as a barrier to quality clinical care.

Discussion: Based on early analysis, HCWs continued to provide FP, and some service-users managed to access it, but others found the perceived risk of infection too high a barrier and discontinued FP during the outbreak. This discussion will be extended when data collection is completed, prior to the conference.
**Intégration des services de santé publics et privés en Haïti : Solution vers la Couverture Sanitaire Universelle?**

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Alain Perodin, Organisation Panamericaine de la Sante/Organisation Mondiale de la Sante

**Abstract Id:** 2880

**Etude comparative dans 5 communes d’Haïti**

Co-authors: Alain Perodin-Organisation Panamericaine de la Sante/Organisation Mondiale de la Sante; Julio Pedroza-Organisation Panamericaine de la Sante/Organisation Mondiale de la Sante; Gadner Michaud-Organisation Panamericaine de la Sante/Organisation Mondiale de la Sante

**Résumé**

La couverture sanitaire universelle et l’accès aux services de santé en Haïti est entravée par l’immense fragmentation des services et la segmentation, avec comme résultats des indicateurs de santé médiocres. Une meilleure organisation de la prestation des services publics et privés à travers la création de Réseaux Intégrés de Services de Santé, stratégie nouvelle pour Haïti, a démontré des résultats positifs en termes de couverture et pourrait être une solution pour avancer vers la CSU. Cette stratégie a connu un embryon d’implémentation avec l’expérience du nouveau modèle d’organisation de soins de santé communautaire à Carrefour.

**Objectifs**

1. Discuter des caractéristiques du RISS.
2. Analyser les résultats obtenus par le RISS et les indicateurs au cours du pilote.
3. Comparer les résultats du RISS de Carrefour avec ceux des autres communes évaluées

**Méthodologie**

Etude observationnelle descriptive/comparative rétrospective des résultats obtenus par la mise en réseau des institutions de santé publiques et privées.

**Résultats**

Le réseau de Carrefour a été le site de mise en œuvre du nouveau modèle d’organisation des soins de santé communautaire et montre une meilleure intégration des services que les 4 autres réseaux évalués, ceci sur tous les domaines d’évaluation du RISS. Par ailleurs, les indicateurs de santé de la population de Carrefour ont accusé une amélioration durant la période d’implémentation du nouveau modèle et du RISS, avec une certaine stabilité et une persistance de la coopération publique-privée même après la fin du projet.

**Conclusions**

La mise en œuvre de RISS est long, complexe et nécessite un dialogue permanent avec les différents acteurs impliqués dans la santé et surtout les organismes de coopération et bailleurs de fonds dans le but de favoriser une prise de conscience du problème de la fragmentation des services de santé.

Avec l’intégration des services fournis par les secteurs publics et le privés, cette stratégie a permis d’universaliser un paquet essentiel de service préalablement non disponibles ou non accessibles à certaines franges de la population. Le RISS permet d’atteindre de bons résultats en matière d’accès et d’améliorer les indicateurs de santé de la population sous sa charge tout en garantissant la continuité des soins axés sur les personnes sur le long terme.

Le RISS est une stratégie à recommander pour les pays en développement avec multiples défis en santé.
A new golden age? Proposal for an innovative global health funding mechanism for middle-income countries

Co-authors: protection

Background:
Lauren Wallace, McMaster University
Abstract Id: 2942

Priority Setting for Maternal, Newborn and Child Health in Uganda: Challenges for health equity

Co-authors: Lauren J. Wallace-McMaster University; Lydia Kapiriri-McMaster University

Background: Despite continued investment, Maternal, Newborn and Child Health (MNCH) indicators in LMICs remain poor and there continues to be significant inequities in access to MNCH health services. Poor health outcomes could be explained, in part, by the nature of the MNCH agenda, including an ever-expanding landscape of technological innovations in contexts of limited resources and social and economic discrimination and marginalization. Such an agenda necessitates clear, fair and transparent mechanisms for prioritization that involve diverse stakeholders, integrate equity as a major value, improve the institutional capacity of the health sector, and ensure follow-through from policymaking to implementation.

Methods: Using Kapiriri and Martin's (2010) conceptual framework for evaluating priority setting, we provide an in-depth examination of priority setting for MNCH in Uganda at the national level between 2010 and 2015. This is a qualitative prospective study that draws on 55 interviews and a desk review of policies and media reports.

Results: Priority setting for MNCH in Uganda was guided by explicit tools, evidence and criteria. Various types of evidence were used, such as MNCH indicators and trends, including an equity analysis, burden of disease, and cost-effectiveness. While policies suggest that health sector strategic and investment planning is participatory, respondents indicated that the most vulnerable and disempowered groups do not participate as meaningfully as the rest; the districts and the public, including women, are less likely to participate. Implementation was constrained by an unequal allocation of resources between child health and maternal health interventions, due to donor influence on financial resources. Multiple overlapping MNCH prioritization processes in addition to the limited institutional capacity of the Ministry of Health also constrained implementation. Funding for MNCH increased during the period under review. However, it was not possible to assess the degree to which this, or the priority setting process, contributed to health system strengthening since both the media and interview findings indicated a weak health system. As a result of the policy changes, service delivery was shifted to focus geographically on the hardest to reach and most burdened areas of the country. However, it may be too early to assess the impact of this shift on practice and on Maternal Mortality.

Discussion/Conclusions: Stronger institutional capacity at the MOH and equitable engagement of key stakeholders in decision-making processes, especially the public, and implementers, would improve understanding, satisfaction and compliance with the priority setting process, and facilitate the implementation of well-developed policies.
Health Inequities Among Forest-Dwelling Indigenous Communities in South, Central & North-East India

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Background

Indigenous (tribal) communities in India form a population of around 104 million, are referred to as ‘Scheduled Tribes’ and are eligible for affirmative action. Nationwide health surveys show that the socio-economic and health status of tribal communities continue to be poorer than the general population.

Disaggregated data on the health of tribal communities is not routinely collected at the local or regional level. Moreover, widespread health inequities seen within and across tribal communities are not characterised by the nationwide surveys. A monolithic ‘tribal’ identity is constructed with little attention to local contextual determinants and drivers of disease and disadvantage.

Methods

A sample survey was carried out in three thickly forested and protected regions of South (BRT), Central (Kanha) and Northeast India (Pakke), to develop a baseline dataset for the THETA (Towards Health Equity and Transformative Action in tribal health) project.

The project aims to

1. Describe the patterns of inequities among tribal communities
2. Use theory-driven inquiry to generate theoretical explanations for the continuing disadvantage
3. Pilot a participatory intervention with a tribal community-based organisation and the local district health service in the South Indian site.

Results

While 90% of tribal communities in Pakke visited hospitals for minor ailments, tribal communities in Kanha consulted family/friends (44%) or employed home remedies (35%). Hospital admission in public healthcare facilities was highest in Kanha (82%), followed by BRT (57%). 43% of the tribal community in Pakke accessed private hospitals, compared to 18% in Kanha.

Of women who gave birth in the previous year, only 31% in BRT, 13% in Kanha and 14% in Pakke accessed full ante-natal care services (at least 3 ante-natal visits, 100 days of iron & folic acid supplementation and one dose of tetanus toxoid injection). Percentage of institutional deliveries was higher in BRT (87%) and Kanha (87%) than in Pakke (57%).

Tribal communities in Pakke reported the highest malaria (57%) and lowest tuberculosis (5%) prevalence. Self-reported hypertension was seen in 28% of the population in Pakke, 12% in BRT and was absent in Kanha.

Discussion

We will discuss possible drivers of the intra- and inter-regional differences in tribal health and identify possible theories in existing literature that will help explain the commonalities and differences between healthcare seeking and access patterns in three tribal sites in India. Based on this, we hope to argue for greater local health system-led equity interventions that address contextual determinants of tribal health.
A qualitative analysis of referral non-completion among RDT-positive patients in Uganda's human African trypanosomiasis elimination programme

Co-authors: Shona Jane Lee-University of Edinburgh; Jennifer J Palmer-London School of Hygiene and Tropical Medicine

Background: The recent development of rapid diagnostic tests (RDTs) for human African trypanosomiasis (HAT) enables elimination programmes to decentralise serological screening services to frontline health facilities. However, patients must still undertake onwards referral steps to either be confirmed as cases or declared seronegative. Accurate surveillance thus relies not only on the performance of diagnostic technologies but also on referral support structures. This study sought to establish why some RDT-positive suspects failed to complete the diagnostic referral process in West Nile, Uganda.

Methodology: Between August 2013 and June 2015, 295/346 (85%) people who screened RDT-positive were examined by microscopy at least once and 10 cases were detected. We interviewed 20 RDT-positive suspects who had not completed referral (16 who had not presented for their first microscopy exam, and 4 who had received discordant results but not returned for a quarterly follow-up investigation). Interviews were transcribed and coded thematically to examine experiences of each step of the referral process.

Results: Poor provider communication about HAT RDT results helped explain late or non-completion of referrals in our sample. Most patients were unaware they were tested for HAT until receiving results, and some did not know they had screened positive. While HAT testing and treatment is free, anticipated charges for transportation, other laboratory tests and in-patient hospitalisation deterred many. Most expected a positive RDT result would lead to HAT treatment. RDT results that failed to provide a definitive diagnosis without further testing led some to question the expertise of health workers. For those who attended microscopy examination, the costs of repeat quarterly follow-ups seemed less worthwhile after receiving a negative result with no alternative diagnostic advice or treatment given.

Conclusions: An RDT-based surveillance strategy that relies on referral through all levels of the health system is inevitably subject to its limitations. In Uganda, a key structural weakness was poor provider communication about the possibility of discordant HAT test results, which is the most common outcome for serological RDT suspects in a HAT elimination programme. Patient misunderstanding of referral rationale risks harming trust in the whole system and should be addressed in elimination programmes.
Challenges and approaches to strengthen Humanitarian Health Information Systems: Experiences from an MSF mission in the field.

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Background

Humanitarian health organizations need supporting humanitarian health information systems (HHIS) to analyse, guide and set the pace of their interventions, such as early detection and response of to health challenges related to disease outbreaks or population movements. This HHIS need to be flexible and responsive to change as contrasted with traditional routine, HIS which largely deal with structured situations. This paper identifies challenges in existing HHIS and how they can be made more effective.

Methods

The setting was the MSF Spain mission in South Sudan. The HHIS was deployed in the mission in 2015. A recent field visit in 2018 helped to examine the effectiveness of this HHIS, and to identify means for their strengthening. Qualitative data collected through interviews and observations at coordination, project offices and health facilities, provides the basis for this analysis.

Results

Two key challenges were identified. The first relates to data flow and data quality. Data flow involves 4 sequential steps: 1) Updating clinical file at point of care; 2) Transferring key data into register books; 3) Re-transferring the same data as aggregate numbers into tally sheets; and, 4) Computerization of the tally sheets. This process is extremely tedious and subject to human errors.

The second challenge, because of the first, relates to non-use of data entered into the system for analysis. As a consequence of the manual and time taking data flow process, doctors trust their paper sources and adopt informal means to use data, such as referring to their notebooks for pointers to the numbers.

A potential measure to strengthen the HHIS would be to reduce steps 3 and 4 of the data flow process and to link data collection and use more intricately. This is done through introducing a simple electronic system at the clinic that records a line-list of clinical encounters in offline conditions. It could strengthen data quality and trust and enable users to dedicate more time to using data rather than on verifying data collection.

Conclusions

We believe that approaching this design, using an opensource platform and flexible architecture, arguably can make this solution scalable as a global practice. The challenges, however, are specific to one MSF mission and complexity will heighten in trying to make it a global practice spanning different interventions, projects and facility types. Which is the actual the challenge for a global humanitarian organization. This intervention is currently under discussion with the organization.
What makes the public health system resilient? A set of indicators to guide multisectoral health system emergency/disaster management and risk reduction

Yasmin Khan, Public Health Ontario
Abstract Id: 3763

What makes the public health system resilient? A set of indicators to guide multisectoral health system emergency/disaster management and risk reduction

Co-authors: Yasmin Khan-Public Health Ontario; Adalsteinn Brown-University of Toronto; Tracey O'Sullivan-University of Ottawa; Jennifer Gibson-University of Toronto; Sara Lacarte-Public Health Ontario; Brian Schwartz-Public Health Ontario

Background
Emergencies and disasters are increasing in frequency globally as risks from extreme weather, emerging infectious diseases and rapid urbanization impact population health. The Sustainable Development Goals (SDG) are closely linked with the Paris Agreement on Climate Change and Sendai Framework for Disaster Risk Reduction (DRR). Health systems play a key role in multisectoral action for DRR. Targets for Sendai Framework reporting include tracking deaths and affected persons (Targets A and B), closely connected with SDG 11. The public health system is responsible for population health protection. Strengthening public health system resilience involves understanding how the system can be prepared and how to measure it. The objective of this nationally-funded study was to develop a set of indicators for public health emergency/disaster preparedness.

Method
The Delphi method was employed to engage a national panel of experts to develop indicators and establish content validity. The Delphi is an iterative consensus-building survey technique that involved two online surveys and a virtual meeting. The expert panel consisted of 33 public health and health system emergency management decision-makers from all provinces in Canada. A seven-point Likert scale was used rate each indicator by importance and actionability. The internal correlation coefficient, Cronbach’s alpha, was used to assess consistency and reliability.

Results
Of the 76 indicators proposed for rating, 67 reached consensus of agreement for importance and actionability. These indicators are categorized into 11 elements based on a framework for public health emergency preparedness for Canada: Governance and Leadership; Planning Process; Risk Assessment; Resources; Collaborative Networks; Community Engagement; Communication; Workforce Capacity; Surveillance and Monitoring; Learning and Evaluation; and, Practice and Experience. Reliability of agreement for importance (α=.973) and actionability (α=.953) was considered to be excellent.

Discussion/Conclusion
This study developed a set of indicators for public health and health system emergency/disaster management to be used in planning and decision-making for local/regional health system communities. This rigorously-derived set of indicators enhances the health in DRR evidence base where empirical research is often lacking. The indicators enable public health agencies to assess their readiness to respond to diverse risks, identify gaps, and monitor progress. Since public health is key to protect population health from disasters, readiness of public health agencies is important to achieving Sendai Framework targets A and B. Indicators for Collaborative Networks, Community Engagement, Workforce Capacity, and Learning and Evaluation in particular highlight the importance of multisectoral action to achieve SDGs and Sendai targets for DRR.
Political architecture and legal framework related to Social Health Protection schemes in Pakistan: qualitative inquiry of policy makers’ viewpoint.

Co-authors: Sheraz Ahmad Khan-Social Health Protection (insurance) Initiative, Health Department, Khyber Pakhtunkhwa.; Mohammad Riaz Tanoli-Social Health Protection (insurance) Initiative, Health Department, Khyber Pakhtunkhwa.

Background:
Pakistan is a federal state with three tiers of government. Following contentious general elections in 2013, ever first democratic transition took place in Pakistan. Subsequently, two social health protection schemes were launched. These scheme cover all those living below the national poverty line and transgenders living in the province. In next step, millions of senior citizens and persons with disabilities will be ensured under the scheme. Current paper’s objective is to understand the political context in which these schemes were launched and to explore the constitutional position of access to healthcare in Pakistan. This paper also explores the legal protection/sustainability with regards to these schemes.

Methodology
We used qualitative research techniques with interpretivist paradigm and case-study approach. In-depth interviews were conducted, following by content analysis. Officials involved with these schemes at policy and implementation level were interviewed. Ethical approval was taken from ethics board of Khyber Medical University. Based on purposive sampling, in-depth interviews were conducted and thematic analysis was performed.

Findings
We identified two themes in response to question-1 of our interview, asking about the cause of action behind starting these schemes and their legal protection. These themes were: (i) [initiation of] Social Health Protection as democratization of healthcare, and (ii) [initiation of] Social health protection in legal void. Implicitly, these schemes are a product of grass root political activism and health found berth in election manifestos recently. Also, these schemes lack constitutional guarantee and ensued in absence of overarching legal framework. We also deduce that the current fiscal space is not conformal with the soul of universal health coverage and needs structural reforms.

These schemes have potential to contribute towards achieving health related aspects of sustainable development goals (SDGs), but the current state of planning is deficient. These schemes can potentially lead towards UHC but to that end, financial, political and legal restraints will have to be dealt with.

Conclusion:

These social health protection schemes are high on political agenda but lack constitutional and legal protection. Also, the schemes lack financial sustainability plans, being heavily reliant on Government subsidy with no contributory arm.

Recommendations:
We recommend that urgent debate shall ensue to steer these schemes towards universal health coverage and contribute towards Goal-3 of SDGs. The Government shall promulgate a National health insurance law and define both subsidized and contributory arms. Moreover, the fiscal space needs widening through deliberations between the federal and provincial government(s).
Public Private Partnerships for Improving Maternal and Neonatal Health Service Delivery: A Scoping Review

Co-authors: Rehana A Salam-Aga Khan University; Shehla Zaidi-Aga Khan University

Background: Public Private Partnership (PPP) is a phenomenon that has gained popularity in recent times. In health sector it is defined as an institutional relationship between the government and the private sector (non-profit organizations, for-profit private sector, to achieve a shared health-creating goal on the basis of a mutually agreed division of labor). A major gap is the lack of collated evidence on PPP performance to choose between competing PPP models.

Objective: To systematically review the performance impact of PPPs implemented globally on maternal and newborn health care in low middle income countries (LMIC).

Methods: A Cochrane style systematic review was conducted and we considered all available published papers/reports on the impact of various PPP models that met the framework and quality assessment parameters.

Results: We found 27 PPP interventions across LMICs. Design of PPP interventions was seen to vary by regions. Community based health insurance (CBHIs) are seen mostly in Africa, conditional cash transfers (CCTs) and vouchers originated from Latin America and are now increasingly being applied in South Asia, national health insurance (NHI) schemes purchasing services from private providers are reported from Asia Pacific and Africa, while contracting out to non-governmental organisations (NGOs) and individually practicing general practitioners and obstetricians has a distribution across different regions. Service packages lack standardization and vary widely across PPP interventions. Most packages are heavily tilted towards maternity care overlooking newborn care.

The review of evidence from 27 PPPs provides encouraging and significant evidence of overall impact on increasing the use of maternal health services. Pooled analysis shows that PPP interventions overall significantly improved antenatal care (ANC), institutional delivery and postnatal care (PNC). A strong positive increase in C-section is seen from all studies that provided measurements but these are few and hence results can be taken as indicative rather than confirmatory. Data is thin on maternal mortality, although existing data is indicative decreased in maternal mortality by 28%. There is insufficient data on neonatal health services making it difficult to draw effective conclusions. There is much less data on quality of care.

Conclusion: PPPs can potentially increase access to maternal care services however there is less evidence on newborn care. The type of PPP model influences impact on specific service. Future PPPs should be implemented with better designed and standardized evaluations for a range of MNH services along with evaluating equity, quality measures, patient expenditure reduction and cost efficiency aspects as well.
Are health systems inclusive of displaced health workers more likely to deliver for left behind refugee communities? The case of Syrian doctors in Lebanon

Co-authors: Diane Duclos-London School of Hygiene and Tropical Medicine; Fouad Mohamed Fouad-American University of Beirut; Simon Cohn-London School of Hygiene and Tropical Medicine; Jennifer Palmer-London School of Hygiene and Tropical Medicine; Karl Blanchet-London School of Hygiene and Tropical Medicine

The crisis in Syria has caused more than one million people to be displaced in Lebanon, where healthcare is largely privatised and requires user fees or insurance coverage. On government request, the United Nations Refugee Agency (UNHCR) suspended registration of new arrivals since 2015. A grassroots response – including by trained professionals among the displaced population – has emerged to address displaced population’s health needs. While providing services to refugee communities and being to some extent tolerated in Lebanon, Syrian doctors working without licences face deportation. Examples from Turkey, Sweden or Germany offers insights into how refugee health providers can be part of the solution (Brookings 2017). It is timely to better understand what role displaced health providers play in the response for Syrian refugees today in Lebanon to reflect on current debates on opportunities and challenges to offer temporary licences for refugees’ health workers.

We undertook in-depth interviews with key informants from the Lebanese health system, humanitarian workers and displaced Syrian health providers operating in the informal sector. Interview guides were informed by a literature review as well as information from previous preliminary field visits conducted in Lebanon, and designed to allow unexpected issues to emerge. Ethics approval was obtained in the UK and Lebanon.

While our study is still in progress, three preliminary findings emerged so far. First, while informally providing health services to Syrian refugees in Lebanon, displaced health providers do not operate entirely outside the health system but rather in liminal spaces including formal clinics led by local doctors. Second, our data reveals the centrality of human bonds during clinical encounters and more specifically in humanitarian crises, and highlights the importance of social distance, cultural identity and potential common experience between patients and physicians to understand the level of success of clinical encounters. Third, there is a need for international debates inclusive of medical boards of doctors to take place to discuss more flexible interpretations of credentials.

Delivering health for all refugees requires a deep understanding of interpersonal bonds shaping clinical encounters. Building on existing clinical spaces where different health networks overlap, there is room to test innovative public health interventions inclusive of a skilled pool of displaced health workers, while filling gaps in overstretched health systems.


https://www.brookings.edu/blog/future-development/2017/04/05/amid-growing-need-refugee-health-workers-could-fill-key-gaps/
Support the improvement of technology management in Brazilian National Health System: building a national platform for translation, exchange and social appropriation of knowledge

Co-authors: Jorge Otavio Maia Barreto-Oswaldo Cruz Foundation - Fiocruz; Everton Nunes da Silva-University of Brasilia; Marcus Tolentino Silva-Federal University of Amazonas; Maria-Sharmila Alina de Sousa-Oswaldo Cruz Foundation; Viviane Pereira-Oswaldo Cruz Foundation

Background: Global efforts to institutionalize the knowledge-to-action processes to improve health policy outcomes are ongoing. Knowledge translation (KT) is a dynamic and interactive process that includes synthesis, dissemination, exchange and ethical application of scientific knowledge to strengthen health systems and improve people's health. However, a gap amongst the KT steps at the implementation level still remains, and adequate mechanisms are required. A national KT platform is being developed in a long-term project in Brazil, including methodological and products development to support the systematic and transparent use of scientific research results at different levels of deliberation on health technologies.

Methods: We report our experience on developing the main elements and objectives of this encompassing project to build a national platform to support the improvement of management of health technologies in the Brazilian National Health System, via the development of robust methodological solutions to address the institutional implementation in Brazilian Ministry of Health.

Results: This project was divided into four integrated sub-projects: 1) RAPID, to develop and validate methods to produce synthesis of evidence (rapid reviews) on health technologies; 2) POPART, to develop and validate methods and tools to support and improve the social participation in decision making on the incorporation of health technologies in the Brazilian National Health System; 3) iGUIDE, to develop a framework and methodological guideline for implementation of clinical guidelines and health technologies incorporated into the National Health System, identifying barriers and implementation strategies; and 4) CONSCIO, to develop methods and tools to support the institutionalization of knowledge translation processes within the Ministry of Health and for interested groups on specific health technologies. All sub-projects include four development steps: 1) mapping, analysis and synthesis of the global evidence on methods related to its specific objectives; 2) development and validation of methods for the constitution of specific methodological guidelines; 3) capacity building activities and dissemination of developed methods; and 4) development of operational products based on the methods developed. The project begun in 2016 and will be fully implemented by 2020.

Conclusions: This report addresses a comprehensive platform for health technologies' KT encompassing the development of methodologies based on global evidence and validated for a specific context of implementation - the Brazilian Ministry of Health. Although in its initial phases, first results indicate an opportune framework to both develop and institutionalise KT for larger contexts. Monitoring and evaluation are planned to ensure that the intended results are being produced.
Zoya Mohamed, JSI Research & Training Institute, Inc.
Abstract Id: 603

**Game on! Building and measuring health literacy through a fun, social, interactive game**

Co-authors: Zoya Mohamed—JSI Research & Training Institute, Inc.

**Background/objectives**
Youth in Kenya, like many countries, lack access to credible health information. JSI launched Health Games on the yeepa® platform aiming to share credible, youth friendly health content, developing communities for ongoing learning, and measuring knowledge acquisition. yeepa® is a web-based, scalable, content agnostic gaming platform for social interactive multi-player quiz games. Its inbuilt analytical tool enables real time individual and collective knowledge measurement over time.

Health Games uses gamification to relay health communication information; change behaviours by positively influencing knowledge, perceptions, and attitudes; and break down barriers to health services access. It provides a fun, habit forming interface that meets youth where they spend most of their time – their phones.

**Description of intervention**
The platform currently hosts three games; Your Future, Your Choice!, a sexual and reproductive health (SRH) game; Building Healthy Lifestyles, aimed at informing youth and young adults how to lead healthy lifestyles and learn more about non-communicable diseases; and Introduction to Healthcare Supply Chain Management, which targets healthcare workers with health supply chain fundamentals.

We launched “Your Future, Your Choice” and “Building Healthy Lifestyles” in October 2017 amongst 10 diverse youth cohorts in Kenya with funding from GIZ’s Lab of Tomorrow and the Reproductive Health Supplies Coalition.

**Results**
Over three months, Health Games reached approximately 1010 youth who collectively played over 240,000 questions. The yeepa® index average score for continuous users improved from 297 to 367 points, suggesting an increase in knowledge acquisition over time.

**Discussions/implications**
Gamers testified that Health Games empowered them with information to make better decisions that prevent adverse health outcomes such as unintended pregnancies. This information would otherwise not be conveyed to them within the school system or from their parents, mentors or colleagues. Youth also much preferred the game as an avenue for learning over classrooms or workshops, and for the SRH game in particular preferred the privacy of learning on their phones.

Gaming holds potential as an innovative, youth friendly outreach tool and engagement approach for increasing health literacy, and for possibly influencing future health care decision making. While still in its infancy for health literacy, gaming theory offers a strategy that has the potential to succeed where traditional training has failed.
Does social capital influence the functioning of health facility committees? A quantitative analysis in Nagaland, India

Co-authors: Avril Kaplan-Johns Hopkins Bloomberg School of Public Health; Krishna D Rao-Johns Hopkins Bloomberg School of Public Health

Social capital has been proposed as a key ingredient to achieve a wide set of development objectives: it has been described as the 'missing link' to generate economic growth, and is recognized by the World Health Organization as a factor that shapes population health outcomes. In 2002, the Government of Nagaland initiated a cross-sectorial policy that leveraged social capital to improve the delivery of government services. In the health sector, the policy established committees that incorporated community members into the management of government clinics, alongside health workers. The idea behind Communitization was that given the opportunity, communities with high social capital would take action to improve their health services. Our analysis used cross-sectional data from 97 health facilities and 1446 associated households. The Department of Health and Family Welfare, Nagaland conducted these surveys in 2015 through the World Bank-funded Nagaland Health Project. We found that there was no statistically significant association between social capital and health committee functioning. When we examined other determinants of health committee functioning, we found that committees that included more women, and received government funding and supervision visits were associated with better functioning. The results of our analysis suggest that social capital may not be enough to make health committees function: committees should be empowered with financial resources and have meaningful engagement with the government to take action to improve their health services.
Lifting the left behind—Envisioned sustained novel model for effective delivery of Home-Based Pediatrics Palliative Care—HBPPC in resources limited settings: case study University Teaching Hospital—Kigali, Rwanda

Co-authors: Prosper Karame—Rwanda Biomedical Center; Diane Mukasahaha—Rwanda Biomedical Center - Palliative Care Programme; Aimable Kanyamuhanga—University Teaching Hospital of Kigali - Chief of Pediatrics; Gilles Francis Ndayisaba—Rwanda Biomedical Center - Non Communicable Diseases Division; Clarisse Musanabaganwa—Rwanda Biomedical Center - Medical Research Center

Medical advances have enabled access to quality services for patients with Non Communicable Diseases (NCDs) and palliative care needs. Sound preventive, diagnostic, care and treatment approaches have largely influenced the improvement of health outcomes for palliative cases especially children with life-threatening illness. However, palliative care services are often disconnected from other treatments while the integration of palliative care into the broader healthcare ecosystem could provide quality and comprehensive care (Harding and Higginson 2005). Rwanda, like some other African countries has adopted care models through which non-physician health workers provide pain relief services to patients nearing the end of life (Clark and Wright 2007; Grant et al. 2011; Sepulveda et al. 2003). In this context, the “Home-Based Care Practitioners Program (HBCP) in Rwanda” has been adopted, emphasizing on redistributing palliative care services, follow-up services for stable patients with NCDs, facilitating linkages to higher levels of care if patients experience worsening symptoms, community-based NCDs educational activities and performance of verbal autopsies. Despite this promising undertakings, it is particularly disturbing however that planning for children’s palliative care remains a worldwide critically under-researched aspect mainly with regard to children and parents’ engagement in palliative care resources planning, choosing and deciding care preferences and corresponding delivery modality.

Approach

This study builds from the HBCP’s Model lessons learnt and precedes with critical appraisal of the potential challenges barriers of and facilitators to successful implementation of community-based palliative care management to generate evidence-based recommendations towards development of a community or Family-Based Pediatric Palliative Care (HBPPC) Model in Rwanda.

Results

Insights into developing a Rwandan model to delivery palliative care and home-health programs into a single package of services within the Maternal, Child and Community Health approach and sharing the lessons learnt.

Conclusion

The findings will generate the most informative evidence as basis to appropriately engage in formulation informed policies and management strategies to solve the challenges of planning for care delivery for medically fragile children with palliative care needs in the community who may require different resources and entail different challenges. The model will further provide insights into developing a delivery model of effective pediatric disease-directed treatment or life-extending treatments until the very latest phases of life.
Venkitachalam Ramanarayanan, Amrita School of Dentistry  
Abstract Id: 454  

**Understanding oral health systems - A case study from India**  

Co-authors: India

"Background: Oral health, though intricately related to general health, is often a neglected entity in health policy making. Oral diseases are emerging as significant public health problems due to its morbidity. High costs of treatment and non-availability of oral care at grass root levels is compounding the problem of inequity. The objectives of the study were to understand and analyse the functioning of oral health system in the state of Kerala, India and provide baseline data to convince policy makers in prioritizing oral health.

Methods: A mixed methodological approach was used to analyze the oral health system of Kerala with regard to World Health Organization’s core indicators of health system assessment viz. service delivery, health workforce, health information system, access to essential medicines, health financing, leadership and governance. Data sources included government documents, reports, websites, data from epidemiological studies, facility survey of health centers, key informant interviews and information obtained from RTI appeals.

Results: Oral disease burden in the state is high. A review of epidemiological studies conducted in Kerala suggests that the prevalence of oral diseases is high with dental caries prevalence at age 12 ranging from 37% - 69%. The state has a dentist-population ratio of 1:2200 which is well within the prescribed ratio by WHO (1:7500) which can be primarily attributed to the high output of graduates from dental teaching institutions. In contrast, only 2% of dentists in Kerala work with the government sector which caters to only 6 lakh of the approximately 3.34 crore population of the state pointing to the absence of oral care in first contact levels like primary health centers. Service delivery is chiefly through the private sector and payment for dental care is predominantly through out-of-pocket expenditure. There is lack of effective implementation of National Oral Health Policy.

Conclusion and Discussion: The oral health system of Kerala is skewed in terms of manpower availability and service delivery. Oral health has not garnered enough political priority to bring about radical changes in the delivery of oral care. Integration of oral health with general health programs like Non-Communicable Diseases is the need of the hour. SWOT analysis reveals that Kerala, inspite of its strengths, needs to focus on many key areas to combat the rising burden of oral diseases, mitigate inequities and make oral care universally available, accessible and affordable."
The association between clinical quality and person-centered care in high-volume facilities across Uttar Pradesh, India

Abstract Id: 1405

Co-authors: Beth Phillips-University of California-San Francisco; May Sudinaraset-University of California, Los Angeles; Shreya Singh-Community Empowerment Lab, India; Dominic Montagu-University of California, San Francisco; Shambhavi Singh-Community Empowerment Lab, India

Background. India’s most populous state, Uttar Pradesh, also has the second highest maternal mortality ratio at 285 compared to the national MMR of 167. Reports of disrespect, abuse and other types of mistreatment during childbirth and delivery are commonly cited by both the scientific community and popular media. This has resulted in global initiatives to focus on person-centered care – providing care that is responsive to women’s preferences, needs, and values. This study aims to identify what enables high volume facilities (>200 deliveries/year) to provide both better clinical and person-centered maternal health care. To achieve this objective, we triangulate data from 40 high-volume facilities in Uttar Pradesh, including data on labor and delivery patients, facility-level clinical quality data, and health providers to determine how clinical quality is associated with person-centered care. Additionally, we will use provider insights to inform possible mediating factors to guide potential intervention points.

Methods. The mixed-methods study was conducted in 40 high-volume, public health facilities in 20 districts of Uttar Pradesh. We selected 20 high-performing and 20 low-performing facilities from among 208 high-volume facilities (>200 deliveries/month), using government health data, stratified by facility type and geography. From August to November 2017, we evaluated the maternal health clinical quality and person-centered care quality at these 40 Q+ sites via delivery patient and provider surveys (N=2018, N=251, respectively), qualitative interviews with health providers (n=48), and health service readiness checklists (n=40). We conduct logistic regressions and thematic analyses on our mixed-method results.

Results. Across all study sites, women delivering in higher clinical quality have higher odds (0.94) of reporting worse person-centered care (p<0.05). Looking at specific PCC indicators, we found higher odds (p<0.001) in verbal abuse, providers not introducing themselves, and not explaining exams to women as clinical quality improves (p<0.001). While women were less likely to deliver with an unskilled birth attendant in higher quality facilities, even among these facilities (n=20), over 10% of women (n=96 of 860) report delivering alone, with a friend, relative or hospital cleaner.

Conclusion. While higher-level facilities typically have better clinical care than smaller centers and hospitals in UP, they seem to also provide worse patient treatment – care, support, and clinical practices such as clinical provider presence during delivery. This preliminary mixed data analysis of our study findings demonstrates that efforts to improve PCMC must exist within a context of broader health systems strengthening.
Oluwole Oluyemi, Catholic Relief Services, Nigeria
Abstract Id: 37

**4Children Nigeria Sustainability Model Influenced Government and Private Sector Priority, Fiscal Planning and Investment for Orphans and Vulnerable Children**

Co-authors: Oluwolo Oluyemi-Catholic Relief Services, Nigeria; Tapfuma Murove-Catholic Relief Services, Nigeria; David Akpan-Catholic Relief Services, Nigeria; Faith Lannap-Pact, Nigeria

**Background**

Nigeria is the most populated country in Africa with an estimated 182 million people (est. in 2015). Children aged 0-17 years accounting for 43% or 97.6 million of the overall population. One quarter of this population—about 17.5 million—are orphans and vulnerable children (OVC). A significant proportion of OVC interventions provided in the country are largely donor-driven serving only 0.6% of the population. Country-owned OVC response has not been prioritized by the Government—national and state budget for OVC response have focused primarily on events and infrastructures rather than interventions that improve the wellbeing of OVC and their households.

**Methods**

In 2016, Coordinating Comprehensive Care for Children (4Children) commenced sustainability system improvement interventions using a developed model for ensuring orphans and vulnerable receive the necessary attention to accelerate country-led financing. Capacity of National and State Government were strengthened to perform functions that incorporate proposed sustainability model into Government fiscal agenda, plan and budget. This led to development and costing of state OVC sustainability plans by 32 States and Federal Capital in Nigeria at 4.4 million USD. 4Children also used audio-visual advocacy materials for engagement with strategic public makers, legislatures, government executives, private sector organizations and individuals to influence investment in OVC response.

**Results**

The sustainability model implemented with Government sets the pace for prioritizing OVC interventions in the 32 states and FCT. Costed sustainability plans were incorporated into 2017 state budget for OVC in 24 states amounting to 2.3 million USD. The private sector also costed and integrated OVC programming into their annual plan of action for 2017 at 17.6 million USD. State government are currently adapting the sustainability model to plan for 2018 budget and allocation for OVC. The impact of the documentary contributes to 1.8 million USD budget allocation for OVC and 17.6 million USD private sector novel project.

**Discussion**

The Sustainability model targeted the neglect of OVC country response, addressed dependency on donor funds, improved collaboration across stakeholders, identified keys areas and benefits for government investment in OVC programming to ensure sustainability.

**Conclusions**

The population of OVC in Nigeria shows that the country will need to commit to OVC interventions that address health issues and is responsive to needs of young population.
Neha Singh, London School of Hygiene & Tropical Medicine

Abstract Id: 3346

**Understanding the Tanzanian maternal health care system and its response to payment for performance: an application of causal loop diagrams**

Co-authors: Neha S. Singh-London School of Hygiene & Tropical Medicine; Zaid Chalabi-London School of Hygiene & Tropical Medicine; Karl Blanchet-London School of Hygiene & Tropical Medicine; Peter Binyaruka-Ifakara Health Institute, Tanzania; Michelle Remme-London School of Hygiene & Tropical Medicine; Agnes R Semwanga-Information Systems Department, College of Computing and Information Sciences, Makerere University, Uganda; Josephine Borghi-London School of Hygiene & Tropical Medicine

**Background:** Understanding the impact of health system strengthening initiatives on health systems is critical to optimising their design and eventual impact. System dynamic models (SDMs) is one method that accounts for the complexity of healthcare systems by understanding these systems and their response to health care programmes. SDM represents a top-down approach where the interest is in modelling the complex macro behaviour of the system. The first step in a SDM is to develop a causal loop diagram (CLD), which maps out the health system's variables, their interactions, and eventual response to programmes. We developed a CLD of the Tanzanian maternal health system, representing the demand and supply of maternal care, the factors influencing this, and the expected impact of payment for performance (P4P) on the maternal health system. P4P, or incentives to providers to deliver better maternal care, is currently being scaled-up in Tanzania, and the findings of this study will inform its longer-term design. Methods: The CLD was informed by past health systems research in Tanzania, research on the determinants of demand for maternal care in Tanzania based on past research, data from an evaluation of P4P in Tanzania, and CLDs of health systems in similar settings. Results: Results will present the CLD and discuss features of the Tanzanian maternal health care system, and how it is affected by the introduction of P4P. The CLD will identify cause or influencing variables linked to health system functions (e.g. financing, human resources), and effect or influenced variables (e.g. drug availability, clinical practice indicators) with arrows, illustrating the direction of causal relationships between variables. For example, increased financial incentives may increase productivity of health workers and their motivation and performance; cost of care may have a negative effect on patient demand for services; health worker attitude would have a positive effect on demand. The CLD will also illustrate time delays in causal effect between two variables and feedback loops. Discussion: CLDs are a practical means of visualising the health system and capturing its response to strengthening programmes such as P4P, and are a precursor to simulation models. This CLD will be the first step towards building a SDM for Tanzania – the first time this novel methodology will be applied to understanding this setting's health system, taking into account its complexity. Our results will inform the design of the national P4P programme, in order to optimise health system performance and adaptation.

Co-authors: Adriana Ardila Sierra-Fundación Universitaria de Ciencias de la Salud; María Alejandra Martínez Rodríguez-Investigadora independiente

Antecedentes. En 2012, en Guainía, departamento al suroriente de Colombia caracterizado por una población dispersa (menos de 1 habitante/km²) y mayoritariamente indígena (85%), inició el diseño de un nuevo modelo de salud. Allí, solo el 17% de habitantes recibía una consulta médica al año y las condiciones de vida y de salud eran peores que las de la mayoría de Colombia. En 2014 el nuevo modelo se convirtió en norma (un Decreto) y en 2016 se articuló al naciente MIAS (Modelo Integral de Atención en Salud) que orientaría a toda Colombia. El MIAS en Guainía se empezó a implementar en mayo de 2016 y el pilotaje durará 5 años, siendo considerado el referente para zonas colombianas con población dispersa. Éste incluye la estrategia de Atención Primaria en Salud (APS) basada en la salud familiar y comunitaria, un enfoque intercultural acorde con el principio de diversidad étnica y cultural, y el enfoque de determinantes sociales y de gestión integral del riesgo. Nuestra investigación se está ocupando de analizar esa experiencia de implementación. Métodos. Investigación mixta, cuantitativa y cualitativa, que inició en diciembre de 2016 y durará 3 años. Resultados. En esta ponencia se presentarán los resultados del análisis etnográfico del primer año de implementación, relacionados con APS y con la estrategia de aseguramiento universal a través de un asegurador único - que es una novedad para el Guainía y para el país. En APS predomina el desarrollo de los servicios de salud junto con acciones intersectoriales incipientes y la participación de líderes indígenas que llaman a una mayor incorporación del saber ancestral al Modelo. El asegurador único, que es privado y mayoritariamente del régimen subsidiado, cubrió desde el primer año casi la totalidad de la población, aunque permanecían un par de aseguradores de población contributiva, con efectos sobre la financiación prevista. El impacto del asegurador único en el acceso efectivo a atención médica oportuna ha sido positivo e incluye el acceso a atención especializada de alta complejidad en la capital del país, mediante remisión y transporte aéreo. Conclusión. Aunque se aspira a lograr un Modelo basado en APS, que actúe sobre determinantes sociales, por ahora se logra un modelo de aseguramiento y prestación de servicios, basado en el cuidado primario y en la gestión del riesgo.
Attitudes of District Health Management Teams (DHMTs) towards non-resource based Management Strengthening Interventions (MSI)

Co-authors: Samuel Agyei Agyemang-University of Ghana/School of Public Health; Samuel Kotei Amon-University of Ghana/School of Public Health

Background

Health personnel in Sub-Saharan Africa are confronted with challenges of limited health care resources. Health care resource allocation and equity is important towards attaining efficiency in the health system. Ghana together with donor support partners have implemented substantial health sector reforms over the past decade. Research has been conducted to understand why resource based interventions are usually regarded as successful but no equivalent research to understand the attitudes of health managers towards implementation of programs that do not have financial and logistical support. The study explored health managers attitudes towards non-resource based management strengthening intervention.

Methods

The study areas were Akuapim North, Kwahu West and Upper Manya Krobo districts in the Eastern Region, Ghana. A qualitative approach was adopted in this study to gain an in-depth knowledge of the issues. Using a semi-structured interview guide, 18 core DHMT members in the study district were purposively selected. The qualitative analysis were undertaken with the aid of QSR NVIVO software.

Results

Majority of DHMT members indicated willingness to own an intervention or program which does not add more administrative burden to already existing administrative task burden. They stressed on the importance of program managers developing clear communication message. They also regarded improved in work efficiency and notable improvement in health outcomes as a motivating factor to owning a non-resource based intervention. Some DHMT members' also commits because of the love for their jobs. On the sustainability of such an intervention, majority of DHMTs explained that changes regarding external monitoring and supervision from regional health administration and the project team motivates them to own such interventions. They noticed that when the visits are more frequent and intense, it plays a vital role in the success of a non-resourced based intervention. Some health managers also stressed on the need to involve the right stakeholder particularly those delivering and receiving intervention.

Discussion / conclusions.

Leadership and management strengthening is a key ingredient in health system strengthening in low-income settings. The non-resource based intervention approach was found to be acceptable and effective in improving workforce performance and skills if there are minimal disruption to health services. The Ministry of Health and Program managers should include definite mechanisms to generate information on the effective strategies and successes in implementing non-resource based interventions. This approach will ensure the efficient use of limited resources, address the changing expectations of health workers and recommend areas for timely curative action.
UNEXPECTED EFFECTS RELATED TO THE IMPLEMENTATION OF RESULTS BASED FINANCING:
EVIDENCE FROM A MIXED METHODS STUDY IN MALAWI

Co-authors: Manuela De Allegri-Institute of Public Health, Heidelberg University, Germany; Adamson Muula - College of Medicine, Malawi; Julia Lohmann-Institute of Public Health, Heidelberg University, Germany; Christabel Kambala-University of Malawi, Malawi; Stephan Brenner-Institute of Public Health, Heidelberg University, Germany

Introduction: Impact evaluations targeting Results Based Financing (RBF) are mostly focused on estimating impacts on incentivized services and related expected outcomes. Since they operate at the health system level through the introduction of important incentives, RBF is likely to produce additional unexpected effects, which are rarely documented.

Aim: Our analysis aimed at documenting the unexpected effects of the Results Based Financing for Maternal and Neonatal Health (RBF4MNH) Initiative, a RBF intervention active in four districts in Malawi, which targeted maternal and early neonatal care by combining demand-side (conditional cash transfers) and supply-side (performance-based financing) elements.

Methods: We carried out this analysis at the end of our impact evaluation (2012-2016), drawing from all quantitative (infrastructural assessment, exit interviews, structured provider-patient observations, structured health workers’ survey, and a community survey) and qualitative (in-depth interviews with health workers and policy stakeholders and FGD with women) data sources in our study.

Results: The RBF4MNH initiative resulted in a number of both positive and negative unexpected effects. Referrals from non-RBF4MNH facilities increased, with health workers re-directing more women towards RBF4MNH facilities. Although user charges at RBF4MNH facilities did not increase, health workers did attempt to raise personal earnings by initiating small businesses to sell baby items to women on facility premises. Furthermore, only about half of all eligible women actually received the cash transfer they were entitled to, largely due to conflicts on incentive distribution between health workers and health surveillance agents. Women reported that the cash transfers made their husbands less likely to support them financially during labor and delivery.

Conclusion: Our study demonstrates that RBF programs produce important unexpected effects, drawing attention to the need to engage in more comprehensive evaluation efforts, capable of documenting also such effects.
Adaptation in a world of turbulence and uncertainty: can health ministries in low- and middle-income countries become "learning organizations" to foster health system resilience?

Co-authors: Sweta Saxena-United States Agency for International Development/Asia Bureau; Joseph Naimoli-Not applicable; Natalia Romero-Not applicable

Introduction

Recent public health emergencies and various non-crisis events, such as the pursuit of Universal Health Coverage (UHC), in low- and middle-income countries (LMICs) have contributed to a reappraisal of their health systems through a resilience lens. The literature on resilient health systems in LMICs, however, provides few operational insights on resilience-building. To address this shortcoming, we explore whether health ministries can become "learning organizations" to foster resilience.

Methods

We adopted a multi-stage, iterative methodological approach comprising a purposive literature search on the concept of resilience, the selection of a conceptual framework from the "learning organizations" literature, and a purposive search of the same literature, complemented by expert opinion and the authors' professional experience, to expand on the framework with illustrative examples from LMICs.

Findings

The amplification and application of the framework demonstrated that many LMIC health ministries, by responding to crises, non-crisis challenges, such as UHC, and to both, have created assets necessary for mounting a structured learning process for fostering increasingly resilient health systems. For example, many health ministries have crucial learning management strengths in systematic problem-solving, experimentation, self-analysis, learning from others, and knowledge transfer. Recent methodological advances in measuring the processes and outcomes of learning organizations enhance resilience-building capacity.

Discussion

Even progressive health ministries on a path to becoming learning organizations face substantial challenges in translating their capacity into successful practice. Health ministries have not necessarily recognized the value of their learning assets, identified them as such, or harnessed them in the service of a structured resilience-learning agenda. Research has demonstrated that learning management and measurement skills must be complemented by supportive environments and leadership that reinforces learning, two subjects in LMIC health sectors imperfectly understood. Exemplars of successful learning organizations in high-income countries and LMICs are scarce. Whether learning to become resilient is a priority is unclear.

Conclusions

Many health ministries have capacity to learn how to foster health system resilience; but, can they successfully translate that capacity into practice? Much depends on whether they can harness learning-conducive assets across the sector and overcome practical challenges to continuous, collective learning. Even in the best-case scenarios, learning to foster health system resilience will take time.
Neha Singh, London School of Hygiene & Tropical Medicine

Abstract Id: 3346

Understanding the Tanzanian maternal health care system and its response to payment for performance: an application of causal loop diagrams

Co-authors: Neha S. Singh-London School of Hygiene & Tropical Medicine; Zaid Chalabi-London School of Hygiene & Tropical Medicine; Karl Blanchet-London School of Hygiene & Tropical Medicine; Peter Binyaruka-Ifakara Health Institute, Tanzania; Michelle Remme-London School of Hygiene & Tropical Medicine; Agnes R Semwanga-Information Systems Department, College of Computing and Information Sciences, Makerere University, Uganda; Josephine Borghi-London School of Hygiene & Tropical Medicine

Background: Understanding the impact of health system strengthening initiatives on health systems is critical to optimising their design and eventual impact. System dynamic models (SDMs) is one method that accounts for the complexity of healthcare systems by understanding these systems and their response to health care programmes. SDM represents a top-down approach where the interest is in modelling the complex macro behaviour of the system. The first step in a SDM is to develop a causal loop diagram (CLD), which maps out the health system's variables, their interactions, and eventual response to programmes. We developed a CLD of the Tanzanian maternal health system, representing the demand and supply of maternal care, the factors influencing this, and the expected impact of payment for performance (P4P) on the maternal health system. P4P, or incentives to providers to deliver better maternal care, is currently being scaled-up in Tanzania, and the findings of this study will inform its longer-term design. Methods: The CLD was informed by past health systems research in Tanzania, research on the determinants of demand for maternal care in Tanzania based on past research, data from an evaluation of P4P in Tanzania, and CLDs of health systems in similar settings. Results: Results will present the CLD and discuss features of the Tanzanian maternal health care system, and how it is affected by the introduction of P4P. The CLD will identify cause or influencing variables linked to health system functions (e.g. financing, human resources), and effect or influenced variables (e.g. drug availability, clinical practice indicators) with arrows, illustrating the direction of causal relationships between variables. For example, increased financial incentives may increase productivity of health workers and their motivation and performance; cost of care may have a negative effect on patient demand for services; health worker attitude would have a positive effect on demand. The CLD will also illustrate time delays in causal effect between two variables and feedback loops. Discussion: CLDs are a practical means of visualising the health system and capturing its response to strengthening programmes such as P4P, and are a precursor to simulation models. This CLD will be the first step towards building a SDM for Tanzania – the first time this novel methodology will be applied to understanding this setting's health system, taking into account its complexity. Our results will inform the design of the national P4P programme, in order to optimise health system performance and adaptation.
When health system is barrier to safe healthcare: challenges of managing superbugs in Latvia

Co-authors: Zane Linde-Ozola-Leeds Institute of Health Sciences, University of Leeds

Background: Antibiotic resistant pathogens, often called superbugs, are one of the biggest threats to global health, food security, and sustainable development today. Although the burden of the problem falls heavier on developing countries, there is limited evidence how emerging crisis of antibiotic resistance is managed in developing contexts. Latvia exemplifies the obstacles faced in committing to tackle antimicrobial resistance and delivering qualitative and safe healthcare in the context of universal health coverage.

Methods: Based on ethnographic fieldwork in 2017-2018, the presentation focuses on daily challenges in managing antibiotic resistant pathogens in hospital settings in Latvia. The ethnographic study employed interviews with patients, hospital staff, policy makers, state officials, and NGO representatives and observations in public, policy, and healthcare settings.

Results: The emergence of superbugs and attempts to control this public health problem reveal major failings in the Latvian health system and in pathways to safe and qualitative healthcare delivery. A system, in which instability is normalized as a constant state of affairs and fragmentation and health inequalities are deepening, produces an environment where not only groups of vulnerable patients but the whole medical field can struggle to become ‘visible’ and thus knowable to the health system. However, amidst these uncertainties within the health system, health professionals employ rather creative strategies to navigate systematic, resource, treatment challenges when managing superbugs in Latvian context.

Conclusions: Efforts to tackle global crisis of antimicrobial resistance and improve safety and quality of healthcare for all, need to take into consideration the complex local realities and unintended consequences that health systems can create for their users. The development of ethnographic understanding has a high potential to entangle deeply-rooted disconnections between intentions and (unintended) consequences of health systems.