Poster Abstract Book

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‘Even me, sometimes I get sick’: Governance arrangements, challenges and frontline health worker motivation: A case study of two public hospitals in Ghana

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Background and Objective: How hospital managers exercise power to make decisions that respond to frontline health workers’ personal and organisational needs is an important part of institutional governance that indirectly affects the quality of health care through its effects on worker motivation. This study sought to understand facilitating and constraining factors in hospital managers’ decision making and their effects on frontline health worker motivation and performance.

Methods: Ethnographic study methods including participant observation, conversations and in-depth interviews were conducted over 20 months, with health workers and hospital managers in two public hospitals in Ghana. Qualitative analysis software Nvivo 8 was used to facilitate coding, and common patterns emerging from the codes were further grouped into relevant themes, which formed the basis for interpreting and reporting study findings.

Ethical approval and consent were obtained from relevant authorities and study participants.

Results and discussion: Hospital managers operated in a complex and dynamic environment, but they had limited decision making power, and faced high levels of resource and environmental uncertainty. Consequently managers devised various coping strategies to overcome uncertainties in order to respond to frontline health workers’ personal and organisational needs. Yet, sometimes managers got overwhelmed as they could not find coping strategies to deal with some of the uncertainties. Resultantly hospital managers felt ‘sick’- as they felt a sense of disempowerment and frustration in their efforts to meet frontline health workers and organisational needs.

Conclusion: National and health policies should aim at giving hospital managers more power to make decisions in response to frontline health workers’ personal and organisational needs. This could facilitate timely planning and coordination of activities required for quality maternal and neonatal health delivery.
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Abstract ID: 2004

Information, regulation and coordination: Realist analysis of efforts of community health committees to limit informal health care providers in Nigeria

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One of the consequences of ineffective governments is that they leave space for informal providers to deliver a large proportion of health services. Patients navigate health care markets from one inappropriate provider to another, receiving sub-optimal care, before they find appropriate providers, incurring personal transaction costs in the process. Interventions to address these barriers to accessing services have been hampered by weak governments and because informal providers are well embedded. We therefore sought to understand how and under what circumstances communities may confer resilience on governance by performing the role of governments to limit informal providers within health care markets.

We adopted a qualitative approach, and therefore conducted in-depth interviews with primary health care workers and managers, and group discussions with members of community health committees. We analysed the data obtained using a realist framework to identify the context (circumstances) and mechanisms (modes of reasoning) influencing community response (outcomes strategies). This was informed by the transaction costs theory of the firm by Ronald Coase – that production comes to be organised within firms when the transaction costs of coordinating production through the market is greater than in a firm.

We identified three outcome strategies used by the committees to limit informal providers: 1) Information to encourage the use of the health facility to which the committee is linked, and to discourage the use of informal providers; 2) Regulation to ensure the credibility of the health facility to which the committee is linked, and to keep the activities of informal providers within safe limits; and 3) Coordination of resources to improve the accessibility of health care services at the health facility to which the committee is linked, and to facilitate referral from informal to formal health care providers.

The committees operate within and through the context of existing socio-economic, traditional and religious structures of their community, and with the support of NGOs. Five modes of reasoning inform their functioning – through meetings (as “village square”), reaching out within their community (as “community connectors”), lobbying governments for support (as “government botherers”), inducing and augmenting government support (as “back-up government”) and taking control of health care in their community (as “general overseers”).

Depending on the context, some communities become co-producers of health services, akin to coordinating production through a firm. Where governments are weak, supporting community-level collective action can be an alternative governance intervention for limiting informal providers in local health care markets.
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Abstract ID: 2242

Training Sudanese Clinicians to support South Sudanese refugees living in border regions in the
delivery of primary health care interventions.

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Purpose: Since its secession from Sudan in 2011, South Sudan has faced escalating internal conflict that
has resulted in the displacement of over 2 million people. Included in this figure are 101,440 South
Sudanese seeking refuge in the Sudan, mostly in the border regions. This figure is forecasted to increase
substantially over the coming year, given the recent opening of the Sudanese border to the South. The
first of its kind in the Sudan, the purpose of the proposed training programme is to train Sudanese
clinicians to train South Sudanese refugees living in the Sudan in the delivery of primary health care
interventions. As an initial proof of concept, this project is being conducted at Kosti Hospital, one of five
Sudanese Medical Specialisation Board’s (SMB) training sites located on the border.

Focus: The world faces an estimated shortage of 40-50 million new health workers to overcome within
the next 20 years. The shortage of human resources for health in low and middle-income countries is
especially critical in fragile and post-conflict states. Conflict not only results in the destruction of health
facilities and infrastructure, but also in the frequent and prolonged shortages in drugs and equipment;
the death, injury and exodus of qualified health staff; and restricted access to healthcare.

Significance of the sub-theme area: Working with the SMB, we address three key problems. First, we
aim to alleviate the burden on Sudanese hospitals, currently struggling to care for a growing number of
South Sudanese refugees. While the Sudanese have accepted South Sudanese as citizens in their
hospitals, making services available to them free-of-charge, this has severely increased the burden on
hosting states and on existing health staff. Second, this project increases human resources for
community health among South Sudanese refugees, in the hopes that this will contribute to
strengthening the South Sudanese health system upon their return. Third, it aims to ease renewed
tensions between the Sudanese and South Sudanese in border states, the former of which are
increasingly discontented with having to care for individuals outside of their catchment areas.

Target audience: Policy makers, researchers and non-governmental organisations enlisting the help of
community health workers (CHWs) to mitigate the dearth of human resources for health in post-conflict
and conflict settings.
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Abstract ID: 2891

Coverage and Geographical disparities of Expanded Programme on Immunisation in sub-Saharan Africa: Results from Demographic Health Surveys in 28 countries

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Background: Vaccination has proven to be a cost-effective and beneficial public health intervention to protect both children and adults from vaccine-preventable diseases. Studies from many sub-Saharan African countries showed that the coverage of routine vaccinations is low and grossly inadequate and could not meet the targets of at least 90% vaccination coverage set by the World Health Organization and United Nations Children Fund in achieving as at the end of 2015. Africa and South-East Asia account for more than 70% of global vaccine preventable disease burden, and also responsible for the highest proportion of child mortality and unimmunised children globally. The aim of this study is to evaluate the coverage for basic childhood vaccinations and geographical variation among sub-Saharan Africa countries.

Methods: We performed a secondary analysis using Demographic and Health Survey from different countries in sub-Saharan Africa. The study involved 28 countries with Demographic and Health Surveys that are within the time frame of 2010-2015. Descriptive and spatial data analysis methods were used to determine the coverage level and geographic variation in children aged 12-23 months who received all basic vaccinations at any time before the survey. Kruskal-Wallis test was also used in the analysis.

Results: The basic vaccination coverage ranged from 24.3% in Ethiopia to 90.1% in Rwanda. On average, the countries of West African, Central/East African and Southern African sub-regions recorded 57.2%, 56.2% and 69.2% respectively. There was no significant differences among the three sub-regions, p=0.335. Congo (Brazzaville), Congo Democratic Republic, Cote d'Ivoire, Ethiopia, Gabon, Guinea and Nigeria had numerous regional hotspots of poor performance. Affar and North West regions of Ethiopia and Nigeria had the lowest performance at less than 10%. However, 11 of the countries had at least a region with a high level coverage.

Discussion/Conclusions: The combined use of statistical and geographic system analysis contributes to better understanding of the geographical disparity and identification of poor performing areas for Expanded Programme on Immunisation and vaccination coverage among children in sub-Saharan Africa. This is useful for customising intervention strategies for local regions, countries and more efficient allocation of limited resources. These findings are significant in that it identified the disparities across the regions and implications for maternal and child health services and informing the post-2015 agenda for Universal Health Coverage and Health System Strengthening.
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Abstract ID: 1597

South-South Health Cooperation in/from Latin America: Transformative Social Justice or Continuity of Dominant North-South Aid Patterns?

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In recent years South-South health cooperation in and from Latin American countries (e.g. Brazil, Cuba, Venezuela) has generated significant international attention, with various key global health actors signaling the arrival of a new, transformative model to health and development assistance. But South-South health cooperation is neither new nor necessarily transformative. On one hand, many Latin American countries have participated in mutual health cooperation since the late 19th century. On the other, it is important to distinguish among different forms of South-South cooperation according to their political and ideological orientation in order to determine whether they represent continuity of the dominant form of North-South cooperation or if they offer a break with these hegemonic patterns. As such the geographic origins of cooperation ought not to be conflated with its political ends. Furthermore, some countries, such as Brazil, participate in multiple forms of South-South cooperation. This presentation seeks to historicize and conceptualize a particular kind of South-South health cooperation oriented to social justice (SJSSC). Characterized by horizontal power relations, shared progressive political values, and a profound solidarity with social movements and political parties that struggle for social redistribution and bona fide equity, SJSSC has historical roots in the Cuban revolution and has focused on medical and public health training, exchange of personnel, and the development of solidarity-oriented policies around health and social justice and the societal determination of health.
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Abstract ID: 575

The coexistence of two financing health systems: the case of FONASA and ISAPRE in Chile and the differences among their beneficiaries

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Background: The sanitary system is an important health determinant, its role is to facilitate the timely and equitable access to quality services, and the manner the system is organized may severely affect the achievement of its goals. The Chilean health system, characterized by the coexistence of public (FONASA) and private (ISAPREs) insurance, following social insurance and market logics respectively, provides an interesting framework for the analysis and evaluation of the system’s structure on the health inequalities.

Objective: To stress the differences in social determinants of FONASA and ISAPREs beneficiaries, measuring the performance and effects of the two Chilean sub-systems, using a list of tracer indicators.

Methods: Following conceptual frameworks on the measurement of health systems performance, adapted to the Chilean situation particularities and the available information, it was defined a list of sociodemographic, epidemiological, availability, utilization and coverage, financial and sanitary indicators.

Results: Due to the selection and segmentation, the public insurance concentrates a higher proportion of beneficiaries with greater health needs: elderly, women and people under the poverty line. The ISAPREs average monthly expenditure per beneficiary is US$18 higher than FONASA (35%). Moreover, ISAPRE beneficiaries have significantly greater access to specialists, dentists, laboratory tests and surgical interventions. Finally, lower prevalence of risk factors and chronic diseases are systematically observed for ISAPREs beneficiaries, which can be attributed mainly to the differences in the sex and age structure of both sub-systems.

Discussion: It is expected that public beneficiaries have a higher burden of disease, however, an interesting finding is that, even considering the higher expenditure, utilization and access, the differences in this burden are explained mainly due to cream skimming and not necessarily to a better performance of the private insurers. The differences in the financing insurance, impacting the availability and utilization, allows to illustrate a structural problem of our health system, which is that is not ONE but TWO systems. Therefore, it is urgent to build a bridge between these two worlds.
Mostaque Ahmed, Save the Children, Bangladesh
Abstract ID: 1673

**National scale-up of a clinical skills based training innovation: Bangladesh’s experience with improving neonatal resuscitation using the Helping Babies Breathe curriculum**

Co-authors: Mostaque Ahmed, Altaf Hossein, Save the Children; Ministry of Health & Family Welfare

**Purpose:** In Bangladesh, 61% of all under-five deaths occur among neonates. Major causes of neonatal mortality are preterm complications (45%) and birth asphyxia (23%). Helping Babies Breathe (HBB) is a neonatal resuscitation educational program designed for resource-limited settings based on the premise that rapid assessment at birth and simple newborn care practices lead to better neonatal health outcomes. In 2010, the government committed to national scale-up of HBB to all government health facilities and community skilled birth attendants (SBAs) over the period of August 2011 to March 2014.

**Focus/Content:** A training cascade approach was utilized to achieve rapid coverage, beginning with tertiary facilities and flowing down to primary care facilities including the community. A supervision and monitoring modality was integrated within the existing government system, and an additional monitoring visit was conducted by HBB master trainers. HBB equipment was procured by Save the Children, funded by USAID and UNICEF. A total of 4,491 health facilities were equipped. Institutionalization and sustainability of HBB was achieved through inclusion of HBB in MoH&FW policy and strategic documents; integration of HBB materials and curriculum in pre-service and in-service maternal newborn health training packages; and integration of HBB in monitoring and supervision to reinforce knowledge, skills, and practice by providers on a routine basis.

**Significance and Results:** A year-long newborn care surveillance program to monitor the application of essential newborn care, was conducted in 91 surveillance units (59 facilities, 32 community SBAs) from 8 districts. Of 27,303 deliveries (95% at facility and 5% by community SBAs), 97% (26,572) were live births. Of these, 5.5% (1465) newborns had birth asphyxia and 67% (984) were successfully resuscitated. Approximately 55% (802) of asphyxiated newborns required artificial ventilation using bag and mask. 95% (24,931) of the providers had HBB equipment available during delivery.

In addition, a national HBB evaluation was conducted to assess early stages of the HBB rollout. A total 7,138 deliveries were observed in 16 sub-district hospitals and communities from 12 unions. Findings indicate availability of resuscitators increased from 78% to 94%; Retention of skills in use of bag-mask by providers remained the same between baseline and endline at intervention sites (at 14%), but decreased in control sites from 14% to 2% at endline; and quality measures of resuscitation including correct steps and sequencing increased from 0.9% to 4.2% in intervention facilities.

**Target audience:** Governments and health systems professionals planning for national scale-up initiatives.
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Abstract ID: 1110

**Increasing the responsiveness of the health system in Bangladesh through the development of entry-to-practice competencies for nurse-midwives**

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**Background:** Since independence in 1971, health indicators in Bangladesh have improved significantly. Despite these successes, however, Bangladesh grapples with a growing and increasingly urbanized population, a changing health landscape, and a health human resource crisis. To enhance the resilience and responsiveness of the health system, Government of Bangladesh is committed to increasing the number and improving the quality of the education of registered nurses. Competency based education has been heralded internationally as a method for ensuring that health professionals are being educated to meet the health needs of the population they serve. The Ministry of Health and Family Welfare (MOHFW) embarked on an initiative to develop entry-to-practice competencies for nurses. The project was led by Bangladesh Nursing Council (BNC) with technical assistance from Canadian Association of Schools of Nursing.

**Methods:** Effective competency-based health professional education depends on creation of competencies that harness global knowledge and standards but are adapted to the local context. Broad stakeholder engagement to the process is critical.

A working group of BNC composed of representatives from Nursing Institutes and MOHFW of Bangladesh led this initiative which began with an extensive environmental scan of international nursing competencies and standards. It was used by the group to draft an initial set of competencies. A modified Delphi technique was used to engage multiple key stakeholders in the process, build widespread consensus as they contributed to an iterative process of reviewing and refining the competencies. Two national stakeholder forums were convened and attended by educators in public and private sectors, nurse administrators from hospitals, representatives of other health professions and government representatives.

**Results:** At the commencement of this process, a large gap presented itself between international standards for nursing and what the stakeholders in Bangladesh felt should be included in the competencies. The process allowed for the development of 40 competency statements each accompanied by a list of indicators that provide measurable and observable manifestations of the competency. The final product was both a standard for quality, on a national and international scale, and relevant and achievable locally. It also created a widespread sense of ownership of the competencies among educators and other stakeholders in Bangladesh. The competencies have been incorporated into a revised set of accreditation standards for Nursing Institutes that are currently being piloted.

**Conclusions:** 50,000 copies of the Entry to Practice Competencies booklet printed and disseminated and are being used as a component of the curriculum evaluation. Accreditation visits will assess competency integration in the nursing program.
Shahira Ahmed, Boston University School of Public Health, United States
Abstract ID: 1074

The Organization and Delivery of Provider-Initiated HIV Counseling and Testing (PICT) in Botswana: Lessons-learned for Health Care/System redesign

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Background: Health care/system redesign is gaining momentum as systematic approach to reform delivery of services to improve the quality, efficiency, and effectiveness of patient care. Evidence is lacking on how services are being delivered in practice in developing countries. This study describes in detail how one service, namely provider-initiated HIV counseling and testing (PICT) is integrated and delivered at the primary health care level in Botswana and how implementation differed from the written guidance to better understand the barriers to implementation that are amenable to system redesign.

Methods: This study employed the case-study method to describe in detail the inputs and processes of delivering PICT in Botswana. Fifteen primary health care clinics were purposively sampled from urban and rural districts. Data was collected and triangulated using a facility survey, semi-structured interviews with providers, and direct observation of delivery procedures at each clinic.

Results: The study found that delivery of PICT deviated drastically from national guidelines. Providers were not routinely offering HIV counseling and testing. In relation to inputs necessary for PICT delivery, there was a shortage of staff in urban areas while there was an excess of staff in rural areas. Space for HIV testing was limited and raised concerns about quality of care, particularly in relation to ensuring privacy and confidentiality of patients. There was an extreme shortage of supplies in both rural and urban areas. An ineffective referral system led to missed opportunities for linking patients to prevention, treatment and care services.

Conclusions: Lessons are drawn for broader policy implementation efforts and delivery redesign. First, the inputs and processes necessary for implementation of PICT, and any other service, must be based not only on normative requirements but what is necessary to meet demand for services in real settings. Second, many of the challenges in implementation in resource-constrained settings require addressing the challenges of integrating new services into the already constrained existing services and infrastructure. Finally, the demand for services by different types of patients, for example, patients in rural versus urban areas, must be considered separately to ensure desired outcomes are reached for all.
Lessons for building a resilient health system: Dealing with the threat of Ebola Virus Disease outbreak in Ghana

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Introduction: The outbreak of the Ebola Virus Disease (EVD) in neighboring West African countries such as Guinea, Liberia, and Sierra Leone since 2013 raised concerns about the health systems’ ability to respond to such shocks and be resilient to support basic healthcare services and provision in Africa. For countries bordering the affected areas particularly Ghana, the outbreak was much of a pending threat compelling governments and key health stakeholders to reassess their roles to propelling the health systems. Reassessing the country’s ability to withstand the outbreak led to key steps to strengthen key areas and the health system. This reflection reports on the actions taken by the Ghana Health Service and the Ministry of Health to deal with the pending threat and the structures developed thereof to strengthen the health system.

Methodology: This is a reflective report sharing experience of the multiple actors ranging from the government, ministries to NGOs, donor agencies and community leaders collaborating for the EVD preparedness in Ghana. An in-depth reflections of the issues and gaps within the health systems, the public health service’s ability to respond to a similar outbreak, review of intersectoral engagements and resources were all critically appraised. Being a practitioner and leading the EVD team, providing that insider perspective creates the platform to share the experience and lessons, and opportunities for learning.

Findings and Conclusion: It became evident that the health systems although not fragile, it was equally not prepared to support an EVD outbreak for shock of that magnitude. Hence, the need for all actors to collaborate to maximize their efforts and resources to prepare for an outbreak. The emergency services, laboratory technicians, border control agencies, infection control and prevention agencies, community structures, special burial teams were all strengthened and supported with skills and resources. Government and other actors were committed to the cause and community structures engaged to get buy-in. A comprehensive plan led by the MoH and GHS created a dedicated Emergency Operation Center (EOC) with its special support team, budget, resources and structures from multiple sectors using WHO and FAO guidelines. The government with global support created a hub for transit clearance and committed volunteers to the affected countries to aid in managing the outbreak. It also protected and monitored its air, land and sea borders intensified its surveillance system for early detection, detention, treatment and rehabilitation of EVD cases; concluding the need for collaborative effort.
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Abstract ID: 2230

**Title: Consumers’ knowledge and demand for prepaid health packages at Smiling Sun NGO clinics in Bangladesh**

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**Background:** Out of pocket payment hinders access to health care and pushes households into poverty. To push the universal health coverage (UHC) agenda forward Bangladesh, is taking initiatives in this regard. USAID and DFID funded Smiling Sun (SS) NGO clinics aim to support this journey by providing quality primary health care at an affordable price. As part of a larger feasibility analysis, a study was conducted to explore knowledge of and demand for prepaid health packages among clients of one of the SS NGOs, Concerned Women for Family Development (CWFD).

**Methodology:** A cross sectional mixed methods study was conducted among 180 clients of CWFD clinics including quantitative and qualitative data collection and focus group discussions using structured questionnaire and semi-structured guideline. Pictorial guides were used to describe the prepaid packages. The prepaid packages were defined with expert and stakeholder consultations. Four different packages were offered – two family health packages: basic and extended at $7 and $25 respectively and two maternity packages: ANC only and comprehensive maternity package (CMP) at $32 and $155 respectively. Regular paying SS clients were enrolled as respondents: married pregnant women, married couples and mothers having one or more children.

**Findings:** None of the respondents had prior knowledge about prepayment mechanism; time was taken to explain the concept to respondents. Clients’ interest and demand for these packages were influenced by income and illness history, family type (nuclear or joint) and experience of catastrophic expenditure during last C-section. Service capacity, location of clinics and trust regarding prepayment are other issues raised by the clients. Approximately 71% of respondents were interested in purchasing basic family package and 53.3% comprehensive maternity package-. Around 81.3% respondents requested 2-3 installments to purchase the CMP whereas 94% clients were willing to pay full basic family package cost at one-time prepayment.

**Conclusion:** Different prepaid packages respond to different needs and can be introduced considering the clinic type: CMP at ultra clinics and basic family packages at vital clinics with relatively low utilization to boost attendance. Prepayment in this form, with increased utilization, will help the clinics to increase cost recovery be sustainable in the long run and help the clients reduce their out of pocket expenditures on health. There is also a clear need to increase awareness of and demand for such prepaid schemes, particularly as Bangladesh moves towards UHC.
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Abstract ID: 1630

**Leveraging learnings from high performers to unlock utilization of public health facilities**

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**Background:** Historically, more than a third of births in Punjab, Pakistan, are delivered in the absence of a skilled birth attendant (SBA), leading to high maternal and infant mortality. To increase the SBA rate, Punjab upgraded 700 Basic Health Units (BHUs) to round-the-clock delivery services, beginning in mid-2014. Making these facilities sustainable requires high utilization by expectant mothers to offset the additional costs of service. After two months, data collected by district managers showed that the 150 facilities upgraded in Phase-1 were averaging 22 monthly deliveries, exceeding their historical average of 6. However, utilization was still low compared to their maximum capacity and catchment area population.

**Methods:** Field investigations found that a high performing district, Sargodha, had implemented a set of management practices that led to rapid improvement in utilization. These management practices involved leveraging community outreach workers to increase referrals, using the monthly ‘Estimated Delivery Date’ list of expectant mothers as a tangible target to evaluate facility performance, and instituting daily data sharing routines via SMS to track performance.

Sargodha’s practices were codified and distributed to other districts. A central team then worked to ensure prompt and uniform implementation across all districts. Districts significantly behind on utilization were individually mentored on implementation of these practices.

Weekly deliveries data was collected from the 150 BHUs in 16 districts by the district managers, and reported to the provincial office. Independent monitors audited facility data once every quarter, collecting data using android tablets. For each facility, monitors verified three delivery cases, visiting the mother’s home to confirm the time and place of delivery.

**Results:** 10-months post-intervention, output of the 150 facilities increased from a monthly average of 22 to 46 deliveries per facility, with 92% of the facilities passing the data audit. However, there was wide variation in districts’ performance. A key driver of performance variability was the effectiveness of district’s implementation. Districts with slow or patchy implementation performed up to 30% fewer deliveries per facility, whereas districts with effective implementation performed up to 26% more deliveries per facility compared to the provincial average of 46 deliveries.

**Discussion:** Punjab has now operationalized 700 round-the-clock delivery BHUs. At this utilization level, these facilities are on track to perform 32,000 monthly deliveries, equivalent to the total monthly deliveries in Canada. These results indicate that identifying high performers, sharing their practices, and ensuring effective implementation can potentially lead to higher output from global health interventions.
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Abstract ID: 2850

Do Researchers Uphold Principles of Ethics in Health Systems Research?—Empirical Evidence from an Online Survey

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Background: Health systems research (HSR) is an important way to promote health equity between and within countries. While recent conceptual work has explored what form of HSR should be undertaken to advance global health equity, there is limited empirical data on whether these proposed principles are actually utilized in the field. This study aims to provide empirical evidence to answer the question: Are researchers following equity-oriented principles when conducting research in low- and middle-income countries?

Methods: A 33-question online Qualtrics survey was designed to capture researchers’ experience conducting externally-funded HSR in Low- and Middle Income Countries (LMICs). Respondents answered survey questions in relation to a HSR project in a LMIC on which they had spent the most time during the past five years—known as the “index study.” The survey was distributed to HSR researchers via professional health systems organizations. Data was analyzed using STATA.

Findings: 104 respondents completed the survey; most were 31 years or older (93%) and had been conducting HSR in LMICs for more than 2 years (93%). Nearly half (49%) came from a middle-income country and slightly over one-third (36%) came from low-income countries. 30% of respondents participated in HSR focused on populations that are worst-off in terms of health. All respondents participated in research that focused on improving equity in at least one aspect of health systems. Actors solely from high-income countries were primarily responsible for selecting research questions in 36% of index studies. Although 72% of index studies were conducted as collaboration between high-income country and LMIC researchers, only 53% had research capacity strengthening as an objective.

Conclusion: This is the first study to collect empirical evidence on equity-focused health systems research in LMICs. While it is clear that a focus on equity in HSR is growing, there are still areas for improvement. This survey highlights such areas that need to be better addressed, such as better inclusion of host country researchers in selecting research questions, the need for a more explicit focus on the “worst-off” populations in study countries, and more research capacity strengthening activities for LMIC partner institutions. It provides an important assessment of current HSR activities in LMICs and whether they align with equity-focused research principles.
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Abstract ID: 2244

Recovery and chronic stroke in Malaysia: Using innovative methods to explore the challenges of aging and NCD management in an acute-focused health system

Co-authors: Narelle Warren, Pascale Allotey, Daniel D Reidpath, Monash University; Monash University Malaysia

Background: Resilient health systems are those which simultaneously accommodate the changing epidemiological characteristics of a population and actively engage that population with the health services on offer. This is a dynamic and ongoing endeavour: population health status changes over time, including evolving demographic characteristics, which, with advances in public health practice, prompts health systems to refine their service offerings in response. Health systems thus strive to marry two potentially competing goals: leading and implementing service changes, and instilling within their constituents an engagement in these services. Although this appears fairly readily achievable on the surface, the complexities of chronic disease management are problematic, requiring a multi-faceted, nuanced solution. In this presentation, we ask: 1) how does one cope with recovery from stroke in a health system that is largely focused on acute and/or serial conditions? and 2) what happens in countries facing major challenges regarding aging and non-communicable diseases, including stroke? In considering these, this presentation articulates the challenges for health systems in responding to this complexity in the Malaysian context.

Methods: An ethnographic study design was employed for this study. Taking a holistic approach, a range of innovative methods and elicitation techniques were employed: photovoice, the go-along method of participant observation, talking mats, sensory ethnography, and community mapping. Participants consisted of people with stroke and their primary family caregiver. Each took part in at least three research encounters. The study is ongoing: to date, 55 participants are enrolled in the study.

Results: Preliminary findings indicate that the method has worked very well in capturing the perspectives of a diverse range of people across three different ethnicities and across different age groups (from middle adulthood onwards). Participants reported limited engagement with the health system, which resulted from a range of factors, including low health literacy, limited stroke-specific knowledge, limited health service provision and the perceptions related to this, and geographical and structural access barriers.

Discussion: The use of multiple data collection techniques allow the participation of people with communication difficulties (including aphasia), which are common after stroke, and allow capturing of the full social, cultural and structural context which impact on people’s life after stroke. Stroke, particularly as recovery enters the chronic phase, presents a number of challenges for health management which individuals and the health system have limited capacity to deal with appropriately.
**Decision space for health workforce management in decentralised settings: action research in Uganda**

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**Background:** District level managers need some autonomy and capacity to make decisions in order to develop innovative ways of improving health services. This study explores the “decision-space” – or range of options - that district health managers have to manage their workforce in Uganda. This paper is part of an action-research (AR) study undertaken by the PERFORM Research Consortium in Uganda to explore options for strengthening workforce performance.

**Methods:** The study first identified the “authorised” human resource management (HRM) functions of district health managers from a review of public administration literature. These were then compared with the results of the analysis of data on managers’ HRM practices and perceived degree of decision space collected through focus group discussions and a questionnaire respectively before the PERFORM intervention. In order to identify the effects of AR on HRM the study draws on results from the analysis of in depth interviews with these managers after the PERFORM intervention.

**Results:** Managers’ perceptions about their capacity to make decisions and their actual decision-making practices were shown to be very similar. However, when compared with the public administration literature there were some areas in which managers perceived and made decisions beyond their “authorised” functions while in others, managers didn’t use all the authority conferred by the decentralization policy and regulatory framework. Action research enabled managers to expand their decision space. This in turn allowed them to make more innovative decisions about human resource management for example to introduce attendance control mechanisms or to increase the number of supervisors and their capacity on supportive supervision which is suggested to have had a positive impact on workforce performance.

**Discussion/Conclusion:** The fact that the perceived decision-space and actual HRM practices are very similar suggest that managers make full use of the space they perceive to have. However, the fact that when comparing with the space defined by the policy and regulatory frameworks shows different results suggest potential areas for improvement. This also alludes to the flexibility of the system in this area. As a result of the AR process managers perceived to have been able to strengthen their decision-making capacity which has helped them to improve their HRM practices. This, in turn, suggests to have improved workforce performance and hence service delivery. Action research has potential to strengthen health workforce performance in decentralized settings.
Soumya Alva, JSI Inc,
Abstract ID: 2270

“CHN on the Go” Mobile app and motivation of Community health nurses in Ghana: Results from a Mixed method evaluation

Co-authors: Soumya Alva, Sophia Magalona, Linda Vesel, JSI Inc; JSI Inc.; Concern Worldwide (US)

Background: Community Health Nurses (CHN) are frontline health workers within the Ghana Health Service. who provide maternal and child health services, often in isolated areas and with limited opportunities for career advancement. Past research shows the need to increase their motivation given personal and professional isolation and lack of support. The Care Community Hub (CCH) project involves the implementation of a mobile app, “CHN on the go” in 2014-2016 to improve CHN well-being, motivation, and knowledge. The long term goal is to improve the quality of maternal and child health care and build a resilient community level health system.

Methods: The evaluation uses a mixed method approach at baseline and endline covering about 50 health centers and 240 CHNs in 5 districts in Ghana to understand the effect of the “CHN on the Go” app on CHN knowledge and motivation. Data include in-depth interviews with CHNs and supervisors to better understand CHNs work roles, work burden and challenges, job satisfaction, psyche, and relationship with peers and supervisors, all factors that influence CHNs motivation to perform. Additionally, data were also collected from a self-reported written maternal and child health knowledge assessment and a short self-reported written survey on job satisfaction, motivation, relationship and communication with peers and supervisors, career goals and challenges faced by CHNs. Qualitative data collected during process documentation at two critical time points between baseline and endline help explain the barriers and enabling factors affecting project implementation and the pathways through which the mobile app intervention works in influencing the characteristics associated with their job satisfaction and motivation.

Results: Baseline results provided key information on CHN health knowledge and motivation; their needs such as improving their clinical skills through knowledge and training; work scheduling and time management; the need to communicate between themselves and their supervisors; and recognition from supervisors. Qualitative data through process documentation demonstrated the increasing utility of the app in the above-mentioned domains and the associated pathways through which the theory of change is working to enable change in these characteristics. Results from endline data analysis focus on the overall changes in the motivation and knowledge of CHNs after two years of using the app.

Conclusion: Findings from the evaluation will provide key insights into the ability of a mobile app to improve CHN motivation, a key factor that potentially improves their performance, increase quality of care and build a resilient health system.
Ana Amaya, UNU-CRIS, Belgium
Abstract ID: 3154

**Learning from the offspring: Towards a typology of Health Diplomacy and Science Diplomacy**

Co-authors: Ana B Amaya, UNU-CRIS

Science diplomacy is a relatively new term, although it has long existed within the idea of ‘soft power’ to denote the use of persuasion to influence the behavior or interests of other political actors through non-coercive means, usually via cultural, scientific or political tools. Science diplomacy can inform and support foreign policy objectives; facilitate international scientific collaborations; or improve international relations through scientific collaborations. Importantly, the evidence-based approach of science removes it from the constraints of politics and bias and thus can be seen as a neutral manner to reach common objectives.

As one of the most active types of science diplomacy, health diplomacy has been heavily discussed in recent years particularly in the context of external assistance. While many examples of health diplomacy exist, it is a term that still lacks consensus and is taken for granted to encompass a range of diffuse activities. Given that the majority of the literature deals with global or bi-lateral health diplomacy, the confines of health diplomacy between regions, an increasingly important level within health governance, is even more unclear. The aim of this paper is to provide a typology of health diplomacy with the goal of maximizing the effects of health as a tool for diplomacy and foreign policy that can lead to tangible beneficial results for health systems and populations.

This was done by exploring the use of science diplomacy and more specifically health diplomacy, between the European Union (EU) with the Latin American and the Caribbean (LAC) region. For this, a mapping exercise of existing activities was conducted, as well as a review of the ‘peer-reviewed’ and gray literature and key expert interviews.

Seeking foreign policy goals through health activities may be an voluntary or involuntary undertaking, hence this typology is organized into two general components of intentional and unintentional foreign policy motivations. These are further subdivided into other areas such as lead actor/s, main funding stream and expected impact. Given that health diplomacy is a prime example of science diplomacy, this typology has the potential to support the understanding of the wider field of science diplomacy as well.
Hannah Amoakoh, School of Public Health, University of Ghana, Ghana

Abstract ID: 2436

How frontline health workers in a low resource setting use an M-health intervention to support maternal and child health decision-making

Co-authors: Hannah Brown Amoakoh, Kerstin Klipstein-Grobusch, Diederick E. Grobbee, Irene Akua Agyepong, Mary Amoakoh-Coleman, Ebenezer Oduro-Mensah, Charity Sarpong, Edith Frimpong, Evelyn Ansah, School of Public Health, University of Ghana; Julius Centre for Health Sciences and Primary Care, University Medical Centre, Utrecht, The Netherlands; Research and Development Division, Ghana Health Service, Accra, Ghana; Adabraka Polyclinic, Ghana Health Service, Accra, Ghana; Regional Health Directorate, Ghana Health Service, Eastern Region, Ghana; Dodowa Research Centre, Ghana Health Service, Accra, Ghana

Background: Developing and maintaining resilient health systems in low resource settings requires innovative approaches that adapt technology to context to improve outcomes. Mobile health (mHealth) presents one of the potential solutions to maximize health worker impact, efficiency and health outcomes. We describe how a decision-making support tool that utilizes text messaging of standard emergency protocols for maternal and neonatal care (on request) to healthcare providers in district level health facilities in the Eastern Region of Ghana functions and its potential as a tool to support frontline health worker decision-making.

Methods: This study is done within the context of an ongoing cluster randomized controlled trial (CRCT) that seeks to evaluate what effects the m-Health intervention has on facility-based incidence of maternal and neonatal mortality in the Eastern Region of Ghana. The CRCT has sixteen districts randomized into 8 intervention and 8 control districts. In the 8 intervention districts, there are 13 hospitals, 29 health Centres, 32 Community-based Health Planning Services (CHPS) compounds and maternity homes participating in the study. Frontline health workers, mainly midwives were provided with dedicated phones to access an Unstructured Supplementary Service Data (USSD)-based text messaging of standard emergency obstetric and neonatal protocols. We analysed all requests made to the USSD during the initial 6 months of intervention implementation.

Results: Most (94%) of health facilities participating in the study assessed the USSD platform at least once during the first 6 months of the CRCT. Overall, 2,502 requests were made. The proportion of phones supplied to districts assessing the USSD per district ranged from 61% to 89% (median was 75.5%). Sixty-nine percent (69%) of requests were related to maternal health and the remaining to neonatal health. The most frequently accessed conditions were postpartum haemorrhage (19%), hypertension in pregnancy (12%), prematurity (7%) and abnormal breathing (5%). Phones assigned to midwives (and not communal phones provided) were more likely to be used to request maternal and neonatal healthcare information compared to health facility assigned phones (p-value<0.001). Most requests (66%) were made during the day irrespective of facility type (p-value=0.006). During the night, more requests were made from non-remote study areas compared to remote areas (p-value=0.001).
Discussion/Conclusion: Detailed information on the use of the USSD service provides insight into the information needs of frontline healthcare providers for decision-making and an opportunity to focus support for health worker training and ultimately improved maternal and neonatal health outcomes.
Gianna Gayle Amul, National University of Singapore, Singapore
Abstract ID: 343

A review of health goals in the ASEAN community-building project: Opportunities for global health diplomacy

Co-authors: Gianna Gayle Herrera Amul, National University of Singapore

Background: Despite the anticipated launch of the ASEAN Economic Community, ASEAN’s vision of an ASEAN Community included a Socio-Cultural Community pillar (ASCC) where strategies for poverty eradication, promoting education and healthy lifestyles, communicable disease control, drug prevention and control and disaster preparedness were laid out. In terms of scope, the ASCC was a more ambitious integration project than the AEC. It is thus understandable why the ASCC was not officially launched in conjunction with the AEC since progress in the ASCC is less generalizable and even harder to implement, measure, and monitor and evaluate. With the new ASEAN Blueprint however, there is evidence that health is becoming a more salient issue in the process of ASEAN’s project of regional integration. This study looks into the global health policy and global health diplomacy imperatives in the project of regional integration in Southeast Asia.

Methodology: This preliminary review of the regional strategies and framework for health in the ASEAN Community was conducted through a comparative assessment of the ASEAN blueprints 2009-2015 and 2016 to 2025 in the grey literature (ministerial statements, regional blueprints, project reports). Using a health systems framework and health security perspective, it categorises health-related strategies in the three pillars of regional integration in Southeast Asia and explores the opportunities for global health diplomacy in the region.

Results: Despite improvements in the health systems and human development in Southeast Asia, that are mostly driven by development assistance for health, the process of regional integration has yet to fully optimise the potential of ASEAN as a political and social regional organisation to promote and advance global health. However, a comparison of the ASEAN Blueprints shows that the new ASEAN Blueprint acknowledges the considerable (or lack of) progress of the three pillars of ASEAN now recognises and reinforces the multi-sectoral importance of health systems, the potential of the healthcare industry and the threat of pandemics.

Conclusion: With the ASEAN Community only partially launched, one critical change has been made in the ASEAN 2025 Blueprint which in principle, mandates ASEAN member states to continue the implementation of the unfinished work under the previous 2009-2015 Blueprint. Health-related objectives, many of which are multi-sectoral and transboundary in nature, are now broadly distributed out across the three pillars in the 2025 Blueprint. This is a welcome initiative from ASEAN and opens the door for global health initiatives in the region.
Ni Andayani, Center for Health Policy and Management, Indonesia  
Abstract ID: 2150

**Improvements and challenges in implementing hospital autonomy in state-district hospitals in East Nusa Tenggara Province, Indonesia**

Co-authors: Ni Luh Putu Eka Putri Andayani, Anastasia Susty Ambarriani, Atik Triiretnawati, Elisabeth Listyani, Center for Health Policy and Management

Our goal was to improve health service performance and capacity in NTT state-district hospitals by transforming into financially-autonomy hospital management system. This system allowed more flexibility in allocating resources and offer more space for adopting innovative approach that difficult to be accommodated by the previous centralized-financial system. Our work was integral with our bigger enterprise of Sister Hospital (SH) Program, a paired-partnership between state-district hospitals with medical institution in AIPMNH’s (Australia Indonesia Partnership for Maternal and Neonatal Health) sponsored contracting out doctors. An autonomous hospital management would accommodate SH program.

Four state-district public hospitals in NTT province had been prepared and transformed into public-agency hospital autonomy during 2013-2015. The public hospitals were allowed to revolve their fund and use their revenues to increase health service performances while maintaining its public system ownership. Our evaluations were withdrawn from their health service performances, financial outlooks, and accountability performances to reflect their overall progress. The primary significance improvement in financial performance revealed from significant upsurge of operational income in all four hospitals. Despite their total financial capacities remained in deficit relative to total operational costs, those hospitals had reflected considerable enhancement in financial independence, in terms of operational expenditure. The trends of total patient visits had also experienced considerable increase, both in outpatients and inpatients services. Two district hospitals had showed remarkable achievements.

Related with their accountability performances, accommodative hospital leadership could be critical, but may not as a sufficient condition, for long-term capacity building process. In those two hospitals, leaderships were important for the establishment future investment plan, allocation of resources, internal motivation, external lobbying and building organizational culture and networks capacity. However, successful achievement in financial outlook from hospital autonomy may also be brought and facilitated by the autonomous character of the hospital itself, irrespective of hospital leadership. For this instance, some preconditions should be fulfilled, such as a sustained availability of health care workers and its associated health services provided by SH-like program.

Our evidences indicated that internal entrepreneurship and managerial capacity were among the prominent internal challenges in transformation process. The transformed state-district hospital autonomy, consistent with Sister Hospital Program and Indonesian health coverage, had considerably play important role in building organizational culture and networks capacity of those district hospitals and self-empowering into financially independent public-agency hospitals.
Iqbal Anwar, International Centre for Diarrhoeal Disease Research, Bangladesh, Bangladesh  
Abstract ID: 2214  

Quality of Maternal and Neonatal Health (MNH) care services in for profit health facilities in an urban area of Bangladesh  


Background: For-profit private sector is increasingly contributing to maternal and neonatal health services in many developing countries including Bangladesh. However, they operate beyond any regulatory frame-work raising concerns about quality, cost and equity. Increasing facility delivery may fail to impact maternal and neonatal mortality if the quality remains poor. In view of maximizing the contribution of ever-growing private sector in achieving national public health goals, this study explores the quality of MNH care as part of quality improvement initiative in for-profit private hospitals in an urban area of Bangladesh. 

Method: This study was conducted in 34 for profit private hospitals and clinics providing Comprehensive Emergency Obstetric and Neonatal care (CEmONC) in Sylhet City Corporation, from June to August, 2015. A review of 1343 in-patient medical records of delivered mothers over the previous 3 months was undertaken to assess technical aspects, while a facility survey explored the structural and outcome dimension of quality of care. 

Results: All the participating health facilities had 24 hour electricity, running water, functioning operation theater and postoperative room. However, missing essential infrastructural components included labor room (39%); neonatal care unit (79%) and breast feeding corner (92%). Regarding human resources availability, the median number of full time Obstetricians, Anesthetists and Pediatricians were &lt;1; and there were more unregistered nurses (9) than registered nurses (3). The rate of WHO recommended waste segregation and disposal system was 18% for in house waste and non-existent for outhouse waste management. Of 1343 in-patient medical record reviews, 80% were delivered by Caesarean section. The majority (67%) of deliveries were conducted after 2 pm. Supporting clinical findings such as partograph use (&lt;1%) and vaginal examination findings (21%) to validate Caesarean indication, were also missing. The chief complaint and diagnosis on admission were missing for 20% of patients’ bed-head tickets and hospital copies for discharge certificates were instituted in 30% of facilities. 

Discussion: Though considered CEmONC facilities, labour rooms were absent in significant number of hospitals. Skilled workforce shortage was prominent and reflected in low use of evidence-based clinical practices. Most deliveries were conducted after public hospital office hours, suggestive of dual practice which can jeopardize both public and private health systems. Poor record keeping is a medicolegal concern and improper waste management can increase hospital acquired infection rates. Poor quality of
care observed in this study require immediate policy attention to safeguard individual health and ensure national health system responsiveness.
Carla Arena Ventura, University of Sao Paulo at Ribeirao Preto College of Nursing, Brazil
Abstract ID: 2088

The Single Health System and the Public Defenders Office in the state of São Paulo/Brazil: strategies to guarantee rights related to Mental Health demands

Co-authors: Carla Aparecida Arena Ventura, Edilene Mendonça Bernardes, University of Sao Paulo at Ribeirao Preto College of Nursing

In the 1970s, based on the principle of human dignity, the movement of psychiatric reform in Brazil was founded on the principles of the Single Health System initiating a new order regarding mental health policies, considering people with mental disorders as subject of rights who should be reintegrated into society. Also based on the principle of human dignity, the Public Defenders Office was established in the Federal Constitution (1988) and it was implemented in the state of São Paulo (2006) as a result of a civil society movement. This was considered an innovative proposal in the justice system, which aimed at expanding the access to justice improving the guarantee of integral judicial assistance free of charges to the ones who are considered disadvantaged by the Constitution. This qualitative study based on the Sociology of Absences aimed at analyzing the strategies developed by the Public Defenders Office in the state of São Paulo within the Single Health System, aiming at assuring the access to justice regarding mental health demands. Data were collected through 42 semi-structured interviews with professionals from the Public Defenders Office (17 psychologists. 13 public attorneys and 12 social workers). Data were analyzed through thematic analysis. Findings were categorized resulting in the following strategies: (i) mapping public health services and social care by territory; (ii) integration and articulation of services and orientation to different social actors regarding demands in the justice system identified in the territory; (iii) mediation and resolution of conflicts involving the mental health system; (iv) education about rights. Data evidenced that more than a service for the judicialization of mental health demands, the Public Defenders Office is developing extra-judicial actions and investing in education practices regarding rights, providing tools for the mental health demand with respect to the assurance of their right to health and, at the same time, aiming for the consolidation of the Single Health System’s principles.
Radhika Arora, ACCESS Health International, India
Abstract ID: 1713

Healthcare Think Tanks in India: Challenges, Needs, and Recommendations

Co-authors: Radhika Arora, Vrishali Shekhar, Stuti Shukla, Siddhartha Bhattacharya, ACCESS Health International

Background: Think tanks can play an important role in agenda setting and informing policy. India has one of the highest numbers of think tanks in the world, but the impact of these on policy, especially in health, is much less studied.

There is no gold standard for measuring the effectiveness of a think tank, though efforts to measure this are being undertaken globally. We attempt to understand the current capacities of healthcare think tanks in India, the institutional and environmental barriers they may face in informing policy effectively, and present recommendations to enhance think tank capacity.

Methods: Secondary data sources were used to create a database of 99 think tanks working on health in India, listing some key features. Sixty seven of these met our inclusion criteria; 36 were selected for semi-structured interviews, of which we interviewed 22 using a semi-structured questionnaire. We also interviewed policymakers, members of the media, and researchers.

Responses were categorized thematically in MS Excel, and a second round of interviews was conducted with select organizations and key informants to investigate emerging themes, focusing factors that affect the presence and influence of a think tank.

Results: Almost 30% of think tanks were established between the years 2000 and 2010. The majority of these located in the northern and southern states of India. Our analysis revealed three pillars fundamental to building strong, effective, think tanks: sustainability, capacity, and visibility. Results indicated institutional and environmental challenges, such as the limited demand for evidence, and poor collaboration. Financial constraints emerged as an important challenge, affecting a think tank’s ability to survive, attract and retain qualified personnel, and ability to work on issues relevant to the local context. Capacity constraints included the challenge of producing quality, relevant research and in using communication strategies to disseminate research, enhance policy influence and visibility. There also emerged a need to strengthen the user’s ability to access, understand, and use evidence for policy.

Discussion: Think tanks can play an important role especially at a time when India is undertaking health sector reforms. Our analysis revealed gaps at the level of seeking evidence for policy, and in generating evidence to inform policy. We recommend long term funding opportunities to support ongoing capacity building for think tanks and their audiences; collaborative platforms to enhance the use of existing resources and create opportunities for nesting, partnerships and mentoring at the state level.
Allet Auguste Assi, Abt Associates, Ivory Coast
Abstract ID: 3101

Health Coverage Framework Index as a tool for HRH allocation of nurses and midwives as part of task-shifting in Ivory Coast

Co-authors: Hawa Camara, Loukou Dia, Olivier N’Guetta Kan, Catherine Greene, Avril Kaplan, Abt Associates; Ministry of Health, Department of Human Resources (Ivory Coast); USAID Ivory Coast; Johns Hopkins University

Background: Ivory Coast, a sub-Saharan country affected by the HIV/AIDS epidemic (adult prevalence rate estimated at 3.5%), recognized the importance of human resources in the fight against HIV in their changing health system and has made substantial investments in their Human Resources for Health (HRH). However, major problems remain, mainly in the allocation of HRH in HIV care and treatment health facilities. Data indicates that approximately 50% of children and adults are still not being reached by the different HIV/AIDS interventions, PMTCT is still not available in 49% of health facilities and, the loss-to-follow-up rate is estimated at 45%.

Achieving the 90/90/90 goal for 2020 requires a drastic improvement in the allocation of HRH, more importantly, that of nurses and midwives in heath districts. In order to accomplish this objective, the HFG project implemented a quantitative evaluation of the HRH coverage (availability of health staff in health facilities) by using a measurement tool called the ‘Health Coverage Framework Index’ or HCFI.

Methods: The project worked in primary care facilities, also called ‘Initial Contact Health Establishments (ICHE)’ that are usually prioritized during allocation of nursing staff. Availability of staff at these ICHE was evaluated using the HCFI tool. Data was collected from various sources (registers and reports ranging from 1999 to 2013) providing information on health training, classification, staff and budget allocations. The results from the HCFI, collected from these ICHE, are being used for HRH mapping across these facilities.

Results: The initial spatial distribution indicates significant disparities between districts. While 62% (51/82) of the health districts have an acceptable level of HRH coverage, 31 key health districts show a critical deficit of HRH. The results from the HCFI served to advocate and receive approval from the Direction of Human Resources of the Ivorian Ministry of Health for the placement of newly trained nurses and midwives in the 15 scale-up to saturation (PEPFAR priority) districts experiencing critical lack of HRH. These 187 nurses and 221 midwives now account for 25.44% of all new nurses and midwives placed in PEPFAR-prioritized health districts which represent 18% of all the country’s health districts.

Conclusions: The HCFI tool is helping to improve decision-making of HRH allocation in facilities across the region to increase access to health care services. The HCFI is to be integrated into the Geographic Information System (GIS) which will allow for accurate mapping of health workforce distribution, and strategic HRH allocation.
Roger Atinga, University of Ghana Business School and University of Ghana School of Public Health, Ghana
Abstract ID: 554

A pathway to resilience? Community and Community Health Officers adaptation to health shocks and emergency responsiveness in Ghana’s community-based primary health care.

Co-authors: Dan Kaseje, Great Lakes University of Kisu

Background: To expand primary health care access and quality, Ghana is scaling up a community-based primary care system modelled on the tenets of community participation, volunteerism and use of Community Health Officers (CHOs) (trained Community Health Nurses placed within the community to provide care). However these primary health services are faced with challenges. They are associated with sub-standard quality and lack of emergency response systems. While some communities are able to adapt to these challenges, others are not. This study presents evidence on how some communities remote from health centres and hospitals, and with poor maternal and child health outcomes, collaborated with CHOs to devise emergency response systems to cope with health shocks and uncertainties.

Methods: A qualitative study conducted in four communities in northern Ghana. In each community, we purposefully sampled and conducted in-depth interviews with CHOs and Focus Group Discussions (FGDs) with community key informants: traditional authorities, volunteers, social mobilisation groups and clients. Interviews were tape-recorded, transcribed verbatim and exported to Nvivo 10 for analysis. Two researchers independently coded the text deductively but allowing new codes emerging to be nested into the existing codes. The analysis produced insightful themes which among others included adaptive capacities to emergency responsiveness and health shocks. Such themes were drafted and subjected to member checking with community members, CHOs and district heath leaders to enhance trustworthiness.

Results: Varying strategies were developed collaboratively between the community and CHOs to adapt to health shocks and uncertainties. Monthly meetings and quarterly community durbars were held to share ideas and built critical skill of community members to better anticipate, mitigate, prepare for and cope with environmental related diseases, childhood diseases and emergency labour. The community and CHOs implemented a community emergency transport system (CETS) funded by community contributions in cash or in-kind and fees reviewed periodically to reflect prevailing conditions. CETS routinely provided emergency responsive services to critical patients in households. Community-based social organisations also engaged in social education, knowledge and experience sharing to further strengthen households’ capacity to adjust to health shocks. These initiatives were facilitated by strong local leadership, active voluntarism, CHOs persuasion and strong social support systems.

Conclusion: Stronger collaboration between community-based health providers and community members is important for strengthening health system resilience at the community level. Such
collaboration can also contribute to maximising implementation gains of community-based health interventions.
Kaitlin Atkinson, Simon Fraser University, Canada
Abstract ID: 603

Experience and Impact of a Quality Improvement blended course to address Alcohol, Tobacco and other Substance Use Disorders using the NextGenU.org online model in Kenya

Co-authors: Kaitlin Ann Atkinson, Veronic Clair, William Small, Simon Fraser University

Objectives: This study evaluated (a) the impact of the NextGenU.org online blended course in terms of integrating, improving and sustaining mental health services using quality improvement methods in primary health care in Kenya, and secondly analyzing (b) the experience of participants in the completion of the NextGenU.org online blended course.

Method: This evaluation used a mixed-method design, incorporating both qualitative focus groups and key informant interviews, and quantitative statistical measures. Qualitative data was analyzed using NVivo and a constant-comparison method to identify themes emerging from the data. The themes were compared with another coder to ensure reliability and validity. Quantitative analysis included simple statistical measures. In addition, the researcher incorporated their observations made during fieldwork over the course of a 12-week practicum with African Mental Health (AMHF) to triangulate the results.

Results: Overall, 27 screeners and clinicians completed the NextGenU.org online course. There were two focus groups and two key informant interviews conducted in Makindu district during July - September 2015. In completing the NextGenU.org online course, general knowledge of QI methods, leadership, and conflict management increased. Self-efficacy in staff’s ability to be a leader, in their time management and ability to deal with error and mistakes within the workplace significantly increased. There was also a positive shift in stigma associated with substance use disorders. Most importantly, the integration and improvement in services was sustained even though staff mentioned common challenges such as: workload, time, and financial incentives. Those in management roles could have been more supportive and were perceived to act as a barrier in the integration of services by not following through on commitments and not participating in the course. In terms of the staff’s experience in completing the online course many participants noted strong motivations such as: the certificates, desire for knowledge, personal motivations, and the case studies. The limited amount of space, computers and restrictions on Internet access acted as a barrier in the completion of the course.

Conclusion: This is one of the first evaluations focusing specifically on the experience and impact of QI in integrating, improving and sustaining mental health services in rural, Kenya through completing a blended online course. Based upon the experiences described in the focus groups, the blended online course was perceived to be successful. This analysis indicates that quality improvement is a successful model to improve health services and systems in low and middle-income countries.
Poster Abstracts

Allt Auguste Assi, Abt Associates Inc., United States  
Abstract ID: 3146

Reconnaissance process: Strengthening Haiti’s Health System through the accreditation of their Nursing Schools

Co-authors: Eunice Merisier Derivois, Hawa Camara, Catherine Greene, Avril Kaplan, Elsy Salnave, Cynthia Baker, Joni Boyd, Ministry of Public and Population Health; Abt Associates; Johns Hopkins University; USAID Haiti; Canadian Association of Schools of Nursing

Purpose: The 2010 earthquake and subsequent cholera epidemic severely tested Haiti’s already frail health system. Since then, Haiti has shifted to building a more resilient health care system. A key element is a strong and committed health workforce, which is highly dependent on training sufficient numbers of qualified health professionals, particularly nurses. Recently, the number of private nursing schools has mushroomed to an estimated 400, but the quality of their training is a major concern. In 2013, the Training Division (DFPSS) of the Haitian Ministry of Health (MSPP) set out to improve the quality of nursing education. With support from USAID Haiti, the Health Finance and Governance project, and the Canadian Association of Schools of Nursing (CASN), the DFPSS initiated a project to develop and implement an accreditation program, called “Reconnaissance”, for Haitian nursing schools with the aim to improve the quality of nursing care and expand access to health services for all.

Focus: The Reconnaissance program includes a self-assessment, an on-site visit by DFPSS senior nurses and final recommendation by a jury. The jury is comprised of seven members representing a wide array of key stakeholders including MSPP’s Direction of Human Resources, the Nursing Directorate, and accredited (through reconnaissance) private nursing institutions. Institutions are evaluated against the following seven elements: graduates, teachers, curriculum, resources, admission criteria, governance and infrastructure of the institution. Once an institution has passed reconnaissance, the MSPP provides them with a logo certifying their accredited status. A website was also developed for institutions to apply for reconnaissance electronically, making the application process less burdensome. The manual developed to include all tools, standards and steps of the accreditation process is continuously improved and adapted to include new guidelines, with input from key stakeholders, including evaluators and the jury.

Significance: As a result of Reconnaissance, Haiti has adopted a set of quality standards for all nursing schools. To date, more than 100 private institutions have been evaluated through reconnaissance. Preliminary data shows that, on average, 47 of the 85 schools that have passed reconnaissance have seen an increase in student enrollment of 150% with a 9 percentage point increase in exam pass rate. The dialogue during the accreditation process provides stakeholders with opportunities to reach a common understanding and create greater awareness among training institutions on quality standards of nursing education. The process is now being expanded to include other institutions, including medical and pharmacy schools.
Anton L.V. Avanceña, University of California, San Francisco Global Health Group, United States

Abstract ID: 487

Mapping a healthcare system: a policy relevant tool

Co-authors: Neelam Sekhri Feachem, Ariana Afshar, Cristina Pruett, Anton L.V. Avanceña, University of California, San Francisco Global Health Sciences; University of California, San Francisco; University of California, San Francisco Global Health Group

Purpose: Growing consensus within the global health community on the value of well-functioning health systems has brought much-needed attention and some resources to health systems and policy research. The growing literature on healthcare systems falls into two broad categories. The first provides conceptual frameworks that attempt to take the complexity of healthcare systems and create simplified constructs of interactions and functions. The second focuses on granular inputs or outputs of the healthcare system. Very few articles attempt to translate a conceptual framework into a practical tool that depicts the system as a whole.

Focus/Content: To address this gap, we developed the University of California, San Francisco (UCSF) Healthcare System Mapping Tool, a translational instrument that brings together these two areas of research and creates a platform for multi-country comparative analysis. Using the conceptual framework described in the World Health Report 2000, our tool builds a healthcare system map that provides a macro-level representation of a country’s healthcare system structure, with a focus on how it finances and delivers personal healthcare services. The UCSF Healthcare System Mapping Tool visually represents the fundamental policy decisions involved in the design of any healthcare system: What are the funding sources and how much is spent through each source? At what level does risk pooling occur? Who are the purchasers? What populations are covered? Who are the providers? How are these entities related?

In this presentation, we begin by discussing the methodology of the UCSF Healthcare System Mapping Tool, explain the key design choices that it reflects, and highlight the policy questions it can be used to answer. We then provide a concrete application of the tool by using it to compare the structure, organization, and high-level policy decisions made by two countries in Asia – India and Thailand.

Significance of Sub-Theme or Field-Building Dimension and Target Audience: The UCSF Healthcare System Mapping Tool is an innovative and practical instrument for health policymakers and global health researchers to better understand the structure and financing of a country’s healthcare system. It can assist policy makers in charting a course towards universal health coverage. The healthcare system maps generated using this tool can also facilitate cross-country healthcare system comparisons and inform healthcare system design and policy development in countries striving to develop efficient and resilient health systems.
Richard Ayiasi, Makerere University, School of Public Health, Uganda
Abstract ID: 1920

Adapting official deployment policies for staffing rural areas to build resilient health systems during conflict: lessons from northern Uganda

Co-authors: Richard Mangwi Ayiasi, Makerere University, School of Public Health

Introduction: Between 1986 and 2005, the health care system in Northern Uganda was disrupted by armed conflict. Health managers were faced with the challenge of ensuring a versatile human resources system to ensure staffing of rural health centres. This study explored how the health sector adapted to changing complex systems in order to draw lessons for developing resilient health systems during conflict.

Methodology: This study was conducted among - three local government employers (Amuru, Gulu and Kitgum) and Faith Based Organisation (FBO) in 2013-2014 using qualitative techniques. Document review, In-Depth Interviews (10), IDIs (10) and Key Informant Interviews (23) were conducted.

Results: During conflict recruitment was not commonly conducted in local government facilities partly because of insecurity. In FBO, health managers recruited using informal procedures. For example, staff recruitment was initiated by word of mouth making it rapid and less bureaucratic. FBO devised bonding arrangements for good performing students in nurse training schools and regularized their appointment after final examination results were out. Furthermore, bonding was done through funding by DANIDA that offered funding for tuition and upkeep to local high-school students to pursue nurse and midwifery training. During the conflict, deployments in local governments and FBOs were sometimes negotiated. In both cases, health managers discussed with health workers whether they were in favour of transfer to a particular health centre or if they had preference for a specific health centre. Negotiating deployment was necessary because the severity of insecurity was perceived differently among health workers. Similarly, as expressed by health managers: “not to rock the boat further” because staff that had accepted to serve in a conflict area were considered to have volunteered enough to remain serving while other staff had already fled the area. Therefore, transfer of a staff by strict application of the rules could have reduced their concentration in service delivery.

Conclusion: Though the official recruitment and deployment policies did not change during the conflict period, managers in both the public and FBO sectors working in decentralised contexts had sufficient autonomy to adapt the implementation of policies. Conditions of autonomy allowed for flexibility and adaptation for local governments under the decentralised system and pragmatic leadership supported the recruitment and deployment of health workers in rural areas during conflict. Such ingenuity from health managers should be encouraged rather than penalised in order to organise resilient health systems during times of complex situations such as conflict periods.
A GENDERED APPROACH TO SUPPORTIVE SUPERVISION: A FRAMEWORK FOR INQUIRY

Co-authors: Monita Baba Djara, Maeve Conlin, Anupa Deshpande, Management Sciences for Health; USAID Expanding Monitoring and Evaluation Capacities (MECap) Project

Background: A strong, prepared health workforce is integral to providing resilient and responsive health services. In 2008, WHO reported that women comprised over 75% of the health workforce in many countries but tend to be concentrated in positions that required less training and with lower status. Consequently, men are more likely to be managers and supervisors in the health workforce than women. The USAID-funded Leadership, Management & Governance Project (LMG) developed a framework positing that gender-transformative manager-supervisee interactions and supportive supervision may improve service quality by advancing gender equity.

Methods: To study HRH performance, productivity and retention, and improve human resource management (HRM) interventions in the developing country context, LMG conducted preliminary, formative research into gender disparities in the health workforce by asking:

- How do gender norms and attitudes influence manager-supervisee interactions that can affect provider decision-making agency, thereby impacting client interactions, client care, and client satisfaction?
- To what extent do HRM interventions in FP reference gender issues and gender-transformative policies or actions?

The team conducted a targeted literature review followed by key informant interviews with 14 global experts in gender, family planning, and HRM to draft a theoretical framework for Gender Transformative HRM interventions that could influence workforce retention, productivity, and gender equity to bolster service delivery outcomes. We then tested the framework through semi-structured interviews with 17 field-based respondents from two East African countries working in family planning settings. Responses were analyzed thematically and used to revise the framework.

Results: Field insights revealed gendered perceptions of ambition, management style, accountability, and adherence to HR policies. Most acknowledged the difficulty of separating gender from other sources of bias and discrimination in the workplace (e.g., age, seniority, ethnicity, religion). All respondents noted that gender was important to consider in the interpersonal implications of HR policy implementation; and that there was a need to address gender in the workplace to improve supportive supervision, performance, and retention. The framework was revised based on these field results.

Discussion: This framework illustrates the potential of manager-supervisee interactions, specifically supportive supervision interventions, to improve gender equity as a means to support and retain a productive, well-trained workforce, and sustain high-quality services. The framework is intended to inspire further investigation and encourage continued discussion on how gender –transformative program and policy formulation can influence gender norms and attitudes that, in turn, affect provider-client interactions as well as quality of care and client satisfaction.
Using feasibility study data for the design of the community-owned, led, and funded Ukana West Ward II Community Based Health Insurance (CBHI) model in Nigeria

Co-authors: Monita Baba Djara, Philomena Orji, Joy Kolin, Abimbola Kola-Jebutu, Duke Lawrence Ogbokor, Catherine J. Fischer, Management Sciences for Health; United States Agency for International Development, Nigeria; United States Agency for International Development

Background: Management Sciences for Health (MSH) funded by the United States Agency for International Development (USAID) commenced technical assistance (TA) to the Nigerian National Health Insurance Scheme (NHIS) in 2011 to implement sustainable health insurance schemes. Technical assistance was also provided to the Ministry of Health of Akwa-Ibom and Gombe states to design and implement community-based health insurance (CBHI) for access to quality health services. MSH supported Akwa-Ibom to design and launch the Ukana West Ward II (UKWWII) CBHI pilot scheme in August 2014 and currently provides TA to ensure its sustainability. Functional parameters (premium, provider payments, benefits package etc.) for the scheme were developed from results of NHIS’ feasibility studies and discussions with communities, state and local government authorities.

Methods: In 2013, a feasibility study of CBHI schemes in Akwa-Ibom State was conducted to generate data for the design of the UKWWII CBHI. Household surveys using structured questionnaires were conducted for 10 randomly selected households in 25 enumeration areas in Essien Udim local government area (LGA) with 167,820 total respondents. The survey assessed demography, health seeking behavior, affordability of health care services, willingness and ability to pay for CBHI and capacity needs of health facilities in the LGA. Focus group discussions were held with selected participants on the ability and willingness to pay for insurance premiums. Data on demography, disease prevalence, mortality etc. were obtained from the LGA.

Results: Findings from the survey indicated a high demand for CBHI, with 99% of the respondents showing their willingness to join {mean willingness to pay per person per month of N392 ($2), equivalent to about N4, 704 ($24) per year}. It showed strong preferences for inclusion of services such as laboratory (72.5%), pharmacy (55.3%), maternity (50.1%), treatment at public hospital (41.6%) and primary health care center (28.8%) in the benefits package. The study also revealed a culture of communal living with a high level of social capital indicating potential to pool resources for the establishment of a viable CBHI scheme. These informed the design of the UKWWII model. 606 people have enrolled into the scheme and service utilization has increased to an average of 40 visits per month from 10 visits per month.

Conclusion: The feasibility study generated the baseline information for setting up the functional parameters of the scheme. It also determined the overall sustainability of introducing a social health insurance scheme in Essien Udim LGA.
Evaluation of the Effectiveness of a Latrine Intervention on Childhood Diarrheal Health in Nyando District, Kisumu County, Kenya

Objective and Background: Community Led Total Sanitation is an intervention to improve sanitation in communities via latrine construction activities using local resources. The goal of the intervention is to end the practice of open defecation to reduce diarrheal disease in children. The objective of this study was to measure the effectiveness of the Community Led Total Sanitation latrine intervention in Nyando District, Kisumu County, Kenya by examining the association between community latrine usage (ODF status) and childhood diarrhea illness.

Methods: A condensed cohort study designed was used to administer interviews to 210 parents or caregivers in a 100% latrine using community and 216 parents or caregivers in a non-latrine using community of children ≤5 years old. The survey ascertained information on childhood diarrheal illness, drinking water safety, latrine behaviors, breastfeeding, demographics, hygiene, and co-morbidities. Water testing was conducted to determine E. coli and turbidity levels for 55 water sources in the locations. Anthropometric data was obtained for each child subject.

Results: Multivariable log binomial regression was used to calculate prevalence ratios to measure the association between ODF status, diarrheal illness, and risk factors. The community without 100% latrine usage had a nonsignificant 16% increase risk of diarrhea compared to the community with 100% latrine usage. Children’s HIV positivity (APRR=2.29; 95% CI: 2.07, 2.53), parents safely disposing of young children’s stools (APRR=1.92; 95% CI: 1.74, 2.12), and low household income (APRR=1.93; 95% CI: 1.46, 2.56) were all positively associated with diarrhea. The location with 100% latrine usage had more unsafe drinking water compared to the area without 100% latrine usage (67% vs. 60%).

Conclusion: Diarrheal disease rates in children ≤5 years old did not differ by whether a latrine intervention was implemented. Our findings suggest that water safety offset the relationship between ODF status and diarrheal status due to a higher likelihood of unsafe water consumption in the ODF community. Improved water treatment practices, safe stool disposal, and education may improve the CLTS intervention in ODF communities, and therefore reduce the risk of childhood diarrhea.
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Abstract ID: 1996

Unleashing diaspora capacity to support nation health: the case of medical specialties in Sudan

Co-authors: AYAT ABU-AGLA, ELSHEIKH BADR, SUDAN MEDICAL SPECIALIZATION BOARD

Background: The decades of civil war took their toll on the Sudan’s health system. The shortage, skill mix imbalance, geographical misdistribution and migration of its human resources for health (HRH) are among the challenges the country has faced. Migration in particular has jeopardised the health system governance; health service provision and health worker training capacity and quality. Over 60 percent of the Sudanese physician workforce practice abroad mainly in Europe and Gulf countries; these are involved in several vivid diaspora networks and groups.

Methods: An implementation research approach to strengthen learning at local level was conducted by establishing a diaspora engagement program at the Sudan Medical Specialization Board (SMSB). Partnerships were built with expatriates through their organised network; professional bodies; or as individuals. They channel their knowledge, resources, time and efforts to better train residents and students in the country through organised visits; conferences; workshops; trainings and mock exams throughout the year.

Results: A diaspora engagement program was established at the SMSB in 2015 with an action research approach. The SMSB assigned focal unit and approached diaspora for collaboration. Five agreements were signed with diaspora associations in UK, Ireland and the US in addition to the Gulf. Three major conferences were organized in Sudan involving over 120 diaspora specialists who delivered over 25 workshops and hands-on training for residents in specialty programs. An electronic database for diaspora expertise was developed enabling scheduling of individual contributions to address gaps in training within Sudan through mobilizing diaspora potential.

Engagement of diaspora has brought in additional benefits including enhancing external links for the SMSB, promoting interdisciplinary collaboration, and motivating students and peers alike. The SMSB program also enabled diaspora contribution beyond the remits of specialty programs including areas such as delivery of specialized health care and training of medical students.

Discussion/conclusion: The need for innovative solutions is key in addressing the health system challenges witnessed in developing countries. Identifying local health system bottlenecks; addressing them by tailored educational and training solutions through diaspora engagement is found successful in the context of Sudan. The program developed a system-focused multi-actor partnerships to increase availability, access, affordability, and use of medical training and health services.
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Abstract ID: 3279

Measuring inequality in the use of screening tests in Mexico: an analysis of the national health surveys 2006 and 2012

Co-authors: Dulce Alejandra Balandrán, Universidad Nacional Autónoma de México

Introduction: The social determinants of health explain most of the inequities prevailing in this area. The measurement of inequality has shown clearly the existence of health gaps between individuals. Health inequality monitoring contributes to make progress towards equity for an effective access to health services. The role of secondary prevention, particularly on the early diagnosis of chronic diseases, is important to trigger the process of timely care.

Objective: To measure inequality in the use of screening services in adults aged 20 to 59 from a secondary analysis of data collected by national surveys in 2006 and 2012.

Methodology: Measurements of absolute and relative gap were estimated, as well as gradient (Kuznets all (Ka) and relative, and indices of inequality of the slope (IDP) and concentration in Health (ICS)) taking into account 5 screening indicators: Papanicolaou coverage, mammography, screening for diabetes, hypertension and prostate cancer. The social stratifiers considered were: socioeconomic status, education level, ethnicity, literacy and unemployment. In addition, the effective coverage was estimated from the correspondence between the type of health service membership and the service provider.

Results: In most of the screening tests differences between income quintiles were observed with general downward trends in gaps but with significant challenges in coverage (overall Papanicolaou coverage went from 41.3% in 2006 to 64.3% in 2012, Ka2012 -2.7; mastography moved from 22.3% to 59.7%, Ka2012 0.6; detection of diabetes changed from 20.5% to 24.3% Ka2012 -10.7; detection of hypertension from 21.2% 28.2% Ka2012 -7.7, and prostate cancer screening from 6.0% to 14.4%, Ka2012 -15.8). In average, one of three persons affiliated to social security or to popular insurance (Seguro Popular) conducted their screening tests in private type services.

Conclusions: Inequalities in health outcomes, in a lesser or greater degree, were consistently observed. Although all showed an increase in overall coverage from 2006 to 2012, except for mammography and Papanicolaou smears, most of them have changed in a little way the inequality gap (diabetes and hypertension screening), and even an increase in the case of prostate cancer screening has been observed. Variations depending on the type of protection in health could affect or determine the effective access to secondary prevention in adults, calling for the strengthening in the services performance.

Keywords: inequality, screening services, equity in secondary prevention.
Can Flexible Health Governance Mechanisms Help Create Resilient Cities?: A study of 3 Indian Municipal Corporations (Mumbai, Chennai and Ahmedabad)

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Abstract ID: 2020

Background: India is home to seven out of forty-nine megacities globally making it a region of mega-urbanisation. Uncontrolled urban-expansion has complicated and weakened provision of basic services; regulatory-frameworks and management of health and safety issues making urban-residents increasingly vulnerable to poorer health outcomes.

India’s current (2015) National Health Policy emphasises renewed focus on urban health by improving the efficiency of urban public health systems through strengthening of urban health governance structures. The split between central, state and municipal authorities in terms of health-policy, planning, health-needs and health-system capacity starkly underscores the need for developing resilient urban health systems. This study examines the social, institutional and political dynamics of Urban Health Governance across Municipal Corporations of 3 Indian cities. Mumbai (megacity:18.4m), Chennai (large:8.7m) and Ahmedabad (medium:6.2m). Management of Mosquito Borne Diseases (MBDs) was taken as a one of the indicators of governance. The study aimed to: British Columbia, Canada health governance structures up to the ward-level; Examine different urban agencies responsible for delivering public health services; Identify key indicators to assess the performance; and key strengths and weaknesses in urban health governance.

Methods: Municipal stakeholders from 3 cities closely collaborated in the design of this mixed methods study with purposive sampling. Qualitative data was complemented by secondary quantitative data. The study involved 85 key informant interviews in three cities across 3 stakeholder groups: policy-makers, implementers and civil society/private providers. The quantitative section explored city-wise management and prevention of Malaria, Chikungunya and Dengue over a 10-year period (2005-2015), across 4 indicators: (i) prevalence (ii) morbidity (iii) mortality and (iv) city-level preventive interventions. Quantitative data was extrapolated using ‘R’- statistical software. A dashboard for urban health governance involving seven indicators was subsequently developed that could be used between and within cities in assessing urban health systems

Emergent findings: Few city governments have absolute control over their metropolitan areas. Study findings show: Blurred urban and peri-urban boundaries cause administrative challenges; Disconnect between responsibilities and associated budget allocation prevents local autonomy over health-based decisions makes inter-sectoral cooperation crucial; Discrete municipal divisions addressed health problems with individual approaches creating coverage-gaps and paralysis; However, Municipalities are engaged in institutional/process-based innovations involving: decentralization, civil-society engagement, technology and redefining bureaucracies—through integrated decisionmaking and converging city planning with public health goals.

Discussion: Urban health is shaped by multiple “managerial” considerations, that include financial and regulatory decisions as well as negotiations over access to power and services that may enhance or weaken health-system responsiveness.
Pandemic preparedness, disease surveillance and health systems in West Africa: the case of The Gambia

Co-authors: Julie Balen, Yoriko Masunaga, Momodou Jasseh, Umberto d'Alessandro, The University of Sheffield; The University of Sheffield / Institute of Tropical Medicine Belgium; Medical Research Council Unit The Gambia; MRC Gambia / ITM Belgium

Background: The rapid global spread of severe acute respiratory syndrome in 2003, the 2009 influenza A (H1N1) pandemic, the 2014 multi-country Ebola outbreak and the recent focus on ZIKA virus demonstrate that a long-term global perspective on pandemic preparedness is urgently needed. Effective preparedness requires a multi-pronged, multi-scalar approach of risk reduction, early detection and reporting, rapid surge response, and operational collaboration in medical and non-medical measures. Though a global responsibility, detection and response are, initially at least, largely confined within national domains, and many countries have pandemic preparedness plans in place. However, operationalizing the plans remains a challenge, particularly in impoverished, conflict and post-conflict settings and where health systems are fragile and vastly under-resourced.

Methods: Here, we present a rapid case study of pandemic preparedness in The Gambia, a small country in West Africa that remained on high alert throughout 2014, based on the experience of its geographic proximity and socio-cultural closeness to the epicenter of the Ebola epidemic. In-depth semi-structured interviews were conducted with key informants in clinical and healthcare management positions across urban, peri-urban and rural settings of The Gambia, in addition to non-participant observation of Ebola Task Team meetings held between June and August 2015.

Results: This study draws numerous lessons for improved preparedness and sustained response at national and sub-national levels, including: (1) effective and timely communication and coordination among partners, within and between institutions, is crucial; (2) a focus on business continuity planning and multi-sectoral planning will likely improve knowledge and awareness of roles and responsibilities among first responders; and (3) Personal Protective Equipment (PPEs), other materials and additional training provided can have unexpected system-wide effects, including benefits such as an empowered workforce, greater awareness of infectious diseases and improved hygiene and sanitation practices among healthcare staff.

Discussion/conclusions: Low- and middle-income countries need access to vaccines and medical technologies, as well as resources to build more effective health systems, in order to facilitate containment of diseases and to minimize morbidity and mortality. This places health systems strengthening as a central factor in improving global health and ensuring health security. In The Gambia, a focus on health system “software” highlighted key challenges faced during the West African Ebola outbreak, as well as potential mechanisms for addressing them at national and sub-national levels.
Lastly, it is important to engage in broader discussion relating to concepts, methods and indicators of pandemic preparedness, which remain under-researched and misunderstood.
Poster Abstracts

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Abstract ID: 3282

Analysis of the conditions leading to the effective implementation of PHC-based reforms in Latin America: a multiple case study

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Background: Since the seventies Primary Health Care (PHC) initiatives have been used as tools to promote health systems reforms in the Latin American region with different results. Our objective is to analyze the enablers of the reforms’ political process to produce the institutional and organizational changes.

Methods: We conducted a multiple case of PHC based reforms implemented in the municipalities of Cochabamba, Bolivia; Vicente López and Rosario, Argentina. We analysed the relationship between the political processes (composition and dynamics of the collective action) and the institutional structures (new policies, programs or changes in the management structures) to understand the reforms achievements. We used temporal bracketing strategy to identify different phases of the change process. We used a multi-methods approach which included the collection of qualitative and quantitative data through documental review, interviews and population and services surveys.

Results: The political process in Cochabamba was determined by the conflicts between professional and social movements. Though a PHC network was created it only achieve and selective PHC approach with improvements in maternal and child healthcare.

The political process in Vicente López was led by interdisciplinary PHC teams in a weak alliance with social movements in confrontation with hospital professionals. The PHC network expanded, and achieved significant improvements in health services performance. However, the ongoing political tensions limited the PHC reform to the primary level strengthen.

In Rosario a strong alliance was formed consisting of PHC workers, social movements and municipal authorities. These members were committed to PHC principles and values. Rosario extended the PHC network, and made important improvements in performance and health services management aligned with a PHC comprehensive approach.

Discussion: The reforms enabled new institutional structures which facilitate the creation and/or expansion of a PHC structure by the creation of new health centers, the development of health teams and the expansion of services offered and office hours. This implied a growth in health comprehensiveness and changes in the healthcare and management models, which had a positive impact on PHC performance.

In all the cases PHC evolved from restrictive to more comprehensive PHC approaches but these changes assumed different magnitudes, paths, time frames, and dynamics as a result of the collective action capacities.

Conclusion

The path towards comprehensive PHC is neither a linear nor a natural process. It requires the configuration of a collective action including key actors within the health system that guaranties the required technical and political capacities.
Cudjoe Bennett, The George Washington University Milken Institute School of Public Health, United States
Abstract ID: 1125

**Community Perspectives: Defining the dimensions of health care utilization for HIV/AIDS and diabetes services for residents of the Korogocho slum**

Co-authors: Cudjoe Amani Bennett, Sangeeta Mookherji, The George Washington University Milken Institute School of Public Health

**Background:** An upsurge in the double burden of communicable and non-communicable diseases has accompanied rapid urbanization. As such, there is an increasing need to understand the impact of these demographic and epidemiologic transitions on urban health systems, especially with respect to health service utilization by the urban poor. Hence, there is a need for greater insight into urban health systems and the availability, accessibility, and acceptability of health services for vulnerable urban populations. Moreover, it is important to understand health utilization behavior from the community’s viewpoint, an integral component to health systems strengthening.

**Methods:** We conducted semi-structured interviews with 23 urban slum residents in Korogocho, Nairobi, Kenya. Participants represented a variety of ethnic groups, ages, villages, and genders. The purpose of the qualitative inquiry was to understand the community-defined dimensions of health service utilization with respect to HIV- and diabetes-related services.

**Results:** Korogocho residents use a mixture of formal and informal providers and facilities. Seven dimensions influenced study participants’ decisions regarding their health service utilization – namely, (1) availability of human resources for health, (2) availability of medications, (3) economic access, (4) geographic access, (5) organizational access, (6) interpersonal care, and (7) social support. The impact of these dimensions on service utilization varied by disease type. Study participants deemed that there was greater availability, accessibility, and acceptability of HIV/AIDS services as compared to diabetes services. Further, diabetes is a silent threat to the quality of life for members of this slum population.

**Discussion:** Service utilization is a complex decision outcome of many different inputs and influences, both on the demand and supply sides. There is substantial room for improvement with regard to enhancing the factors that influence the health utilization behaviors of members of the Korogocho community. Slum residents would benefit from social protection mechanisms such as those that are in place for patients with HIV/AIDS, including public subsidies for affordable care. There is an urgent need to raise community awareness and strengthen the service provision and training policies for health workers with respect to non-communicable diseases such as diabetes.
Towards resilient health systems: lessons from building local capacities in health emergency management and planning in Typhoon Haiyan-affected areas in the Philippines

Co-authors: Raoul III Bermejo, Fidelita Dico, Sonja Firth, June Caridad Lopez, Philip Padilla, Maria Lourdes Suplido, Salvador Destura, Johanna Banzon, Arvin Malonzo, Willibald Zeck, UNICEF Philippines; Department of Health -Philippines; University of Queensland; University of the Philippines -Manila; University of the Philippines Visayas; Zuellig Family Foundation; University of the Philippines School of Health Sciences; Bicol University

Purpose: The environmental context of the Philippines makes disaster preparedness and resilience particularly critical. The Philippines is the 3rd most disaster-prone country in the world, with high vulnerability to typhoons, volcanoes, earthquakes, landslides and flash flooding. The devastating impacts of natural and man-made disasters are exposing the vulnerability of communities and their livelihoods. The most recent example in the Philippines is the Haiyan super typhoon, which hit the country on November 8th 2013 and affected over 18 million people and caused approximately US$1.5 billion damage.

In the aftermath of typhoon Haiyan, together with the Philippines Department of Health (DOH) and other partners, UNICEF launched work on evidence-based planning and budgeting for resilient health systems (rEBAP), working on strengthening the health emergency management capacities of frontline health managers and strengthening the process around the preparation of the Health Emergency Preparedness Response and Rehabilitation Plans (HEPRRPs) in the 50 UNICEF-assisted local government units (LGUs). The outcome from work on the ground in evidence based planning and budgeting feeds into national policy development work with DOH and others.

Focus/Content: LGUs have been given directions to develop Health Emergency Preparedness, Response and Rehabilitation Plans (HEPRRPs). However, there were no guidelines yet to provide a step-by-step process for LGUs to develop strategic HEPRRPs that are tailored to the local situation. As a result, a large number of LGUs have failed to produce such plans, which has been identified as a key challenge for the effectiveness of future responses. We drew on findings from the stocktaking exercise after Typhoon Haiyan; an extensive review of the literature on approaches for evidence-based planning for health emergencies; and work with provincial teams to develop a step-by-step process for provincial officials to coach LGUs in producing evidence-based HEPRRPs. Following best-practice approaches, we have adapted the principles of scenario analysis for the development of the HEPRRPs and piloted it with 50 LGUs from the Haiyan affected areas.

Each LGU team went through a sequence of modules throughout a period of a year: psychosocial processing, a course on basic health emergency management, two planning workshops and coaching sessions.

Significance for the sub-theme area/field-building dimension of relevance and target audience:
This initiative covers the development of an evidence-based approach to produce health emergency preparedness and response plans; the development of a framework for assessing and rebuilding resilience; and the use of an innovative leadership and governance programme to support disaster risk reduction.
What do health workers do, and why? A preliminary study of the activities performed by primary healthcare workers in Sierra Leone

Co-authors: Maria Paola Bertone, ReBUILD consortium & Dept of Global Health and Development, London School of Hygiene and Tropical Medicine

Background: What health workers (HWs) do, how much time they spend on clinical, administrative or disease-specific tasks, or on work outside of facilities are central elements in determining HWs performance, service delivery and system resilience. Agency theory predicts that, in their choice of activities, multitasking agents will aim to maximize earnings while minimizing effort so that stronger incentives in one task will drive their effort away from other tasks. In this study, we attempt to empirically test this hypothesis, but also explore other factors, beyond remuneration, which influence HWs choice of activities.

Methods: We first collected quantitative data on incomes through a survey of 266 primary HWs in three districts of southern Sierra Leone. The same HWs also filled in a logbook recording their activities each day for 8 weeks. A series of 39 in-depth interviews were then completed with a sub-sample of the same HWs.

Results: HWs in our sample spend 64% of their time on general clinical activities, 10% on administrative activities, 12% on disease/service-specific activities. Work outside of facilities accounts for 14% of time, and is mostly spent on activities related to public job (outreach, immunization campaigns, training, meetings-12.5%) rather than private practice or non-health activities (1.5%). Fractional multinomial logit regressions reveal little difference based on individual characteristics, while the district of posting significantly affects the time spent on disease/service-specific activities and on ‘outside’ activities. From the interviews, it became apparent that HWs discretion in the choice of activities is constrained. HWs narratives revealed that they regularly interact with a variety of actors, from the District Teams, to NGOs, civil society and researchers. Although not formally accountable to all of them, the interactions play a crucial role in defining service delivery and can re-orient it according to the actors’ own priorities, by introducing reporting requirements, being physically present within the facilities and providing material and technical support.

Conclusions: Although preliminary, this study is useful to illuminate the HWs organization of time over tasks and how it affects service delivery. Both quantitative and qualitative findings concur in highlighting the role of external actors. It is not only the utility maximization of HWs, nor the formal accountability links which define service delivery at facility level, but a broader network of relations within the local health system, which critically includes the provision of material and technical support that HWs need to be able to carry out their tasks.
Olivia Biermann, Consultant at World Health Organization Regional Office for Europe, Denmark
Abstract ID: 1738

The perceived role and influence of facilitators for a policy dialogue's success

Co-authors: Olivia Biermann, Tanja Kuchenmüller, Ulysses Panisset, Mark Leys, Consultant at World Health Organization Regional Office for Europe; World Health Organization Regional Office for Europe; Universidade Federal de Minas Gerais; Vrije Universiteit Brussel

Background: Policy dialogues (PDs) enable interactions between policy-makers, researchers and other stakeholders – one of the factors associated with evidence-informed policy-making (EIP). Studies acknowledge that facilitators play a key role for the success of a PD. However, there is little evidence on what defines a PD’s success from a process and impact perspective, the characteristics of a good facilitator, and how facilitators play their role towards a successful PD. The Evidence-informed Policy Network (EVIPNet), a WHO initiative that started in 2005 to build knowledge translation (KT) capacity of Member States, implements PDs as important instruments in KT.

Methods: To better understand facilitators’ perceived role and influence on a PD’s success, an exploratory study design based on semi-structured interviews with 10 key-informants from Sub-Saharan Africa, the Middle East, North and South America was conducted - purposefully sampled based on experience in facilitating or observing PDs. Thematic analysis was applied using a constant comparative method.

Results: Study participants stated a successful PD would rely on a structured process (e.g. being informed by a pre-circulated evidence brief) – employed to catalyze impact (e.g. improved health, policy implementation and changed mind-sets).

Facilitators’ contributions to a PD’s success were said to materialize in terms of facilitation skills, e.g. helping stakeholders to get to an informed judgment and to formulate tangible next steps by synthesizing discussions well. At the same time, facilitators contribute characteristics such as a) knowledge, e.g. about health system dynamics to be able to give appropriate prompts during the PD, b) attitudes, such as valuing the PD process apart from outcomes and c) attributes, e.g. credibility, leading to stakeholders’ increased commitment. Facilitators’ involvement in preparatory activities and follow-up actions – in particular in terms of engaging with stakeholders – were said to be equally paramount for a PD’s success.

Study participants described numerous challenges they had faced when facilitating/observing PDs and shared how these had been overcome. Many challenges can be anticipated and prepared for to certain extents, e.g. by identifying appropriate stakeholders and analyzing them to anticipate behavior or potential conflicts.

Conclusions: PD facilitators play a crucial role in EIP processes. Facilitators “make or break” a PD’s success. Not only are their skills, attitudes and attributes important, but their involvement in the PD’s
preparatory and follow-up activities. Next to formal trainings, participating in and co-facilitating PDs is considered an important strategy to improve facilitator’s performance and hence influence on a PD’s success.
Maryam Bigdeli, WHO-Genève, Lebanon
Abstract ID: 1185

Development of a WHO toolkit to assess critical dimensions of health system governance in relation to implementation of national policies and plans

Co-authors: Rasha Saadi Hamra, Maryam Bigdeli, Self, Dr. Health Candidate at Bath University; World Health Organization

Background/Introduction: Governance is a cross-cutting health system function that has been neglected in past. Governance is least understood among health system functions, most difficult to measure and its implementation least evaluated. Health system governance (HSG) has various definitions with certain degree of similarity, yet there is no consensus on single unified universal definition. Agreeing on core dimensions of good governance is another debatable subject resulting in numerous lists of dimensions used by different organizations. In addition, existing governance frameworks and assessment tools lack a shared frame of reference which would enable governance to become an accessible and actionable health system function. Furthermore, existing governance frameworks focused at policy formulation level and do not capture complexity and bottlenecks in implementation, i.e. effective oversight, coalition building, regulation and system design.

Assessing and understanding HSG at all levels of health system is crucial in order to understand how to improve its performance.

Purpose: There is a need to conduct methodological work to develop a Governance toolkit that is suitable and practical for assessment of critical dimensions of governance in relation to implementation of national policies. The toolkit to be developed as a WHO initiative will be based on current and previous work by others with further elaboration and to be tested in selected country contexts.

Content/Focus: In order to develop “Governance toolkit” following was conducted:

- Extensive literature review to identify definitions of governance that are available and used by different agencies. Identify conceptual and analytical frameworks available, dimensions of governance that these frameworks cover, as well as indicators they propose.
- Critically analyze all current work to identify strengths and weaknesses in existing tools, highlight current gaps and propose recommendations to fill some of gaps.
- Propose a framework for HSG that will include critical dimensions of governance and core indicators for country assessment.
- The level of analysis of toolkit will be implementation of national health policies and unit of analysis will be ministries of health/health authorities and/or implementing bodies.

Significance to Practice: Outcome is to come up with a tool that will enable identifying weaknesses at governance function that need to be addressed and improved at later stages as a way to improve quality of governance and transform theoretical knowledge on HSG into more practical application.
Target Audience: Ministries of health, stakeholders involved in health systems strengthening and partners supporting improvements of HSG.
Nathan Blanchet, Results for Development Institute, United States
Abstract ID: 1330

**Sustainable HIV financing: is integration into national health insurance the right next step?**

Co-authors: Nathan Blanchet, Michael Chaitkin, Neetu Hariharan, Adeel Ishtiaq, Aparna Kamath, Robert Hecht, Results for Development Institute

**Background:** As countries pursue universal health coverage and brace for reduced donor support and other economic shocks, they must navigate the promise and pitfalls of integrating disease-specific funding into broader health financing systems. We developed an approach to characterizing horizontal financing integration and conducted feasibility studies of integrating HIV financing in two high-burden countries considering major health reforms.

**Methods:** First, we landscaped the extent of financing integration in 13 low- and middle-income countries using a novel descriptive framework. Second, in South Africa and Kenya we examined the feasibility and potential impact of integration options. For each we characterized the incumbent health financing system and designed multiple integration scenarios in consultation with government officials. Scenarios contained distinct configurations of financing pools and governance arrangements. Through desk research, review of government documents and data, and interviews with health and finance officials, we evaluated the scenarios for their feasibility along legal, political, and technical dimensions, as well as estimated their likely effect on the HIV response, primary health care services, and health system efficiency. We then convened policymakers to discuss findings and identify options for further study and implementation.

**Results:** The landscaping found considerable variation in the extent of financing integration across countries and the financing functions of collection, pooling, and purchasing. The country studies illustrated a useful analytical and consultative process for scoping policy options by combining a theory-driven approach to understanding financing integration with a practical application to real-time policy debates. We mapped different pathways available to policymakers for incrementally integrating HIV financing into existing (Kenya) or proposed (South Africa) national health insurance funds. We found substantial variation in scenarios’ feasibility and expected impact and highlighted risks to non-personal interventions and hard-to-reach populations. Without recommending any scenario, we provided a useful foundation for debate and planning among senior officials in both countries.

**Discussion:** As countries seek better evidence on the desirability of financing integration, a consultative process to develop integration options can advance policy dialogue at the most senior levels of government. Suitable options—and their feasibility and likely impact—will depend on country context, including health system capacity, nature of HIV (or other) epidemic, and expectations about future resource availability. We contribute to the growing evidence base on what financing integration means in theory and practice, what risks it might pose to health systems, and how it could enhance health system resilience by promoting greater efficiency and financial self-reliance.
Josephine Borghi, London School of Hygiene & Tropical Medicine, United Kingdom
Abstract ID: 3012

**Investigating the impact of payment for performance on health worker effort for antenatal care**

Co-authors: Paola Vargas, Peter Binyaruka, Josephine Borghi, Oxford Policy Management; Ifakara Health Institute; London School of Hygiene & Tropical Medicine

Background: Payment for performance (P4P) incentivises health workers with a view of improving practice and patient outcomes, in relation to targeted services. However, there is limited evidence of the effect of such schemes on health workers in low and middle income country settings. This paper assess the effect of P4P on health worker knowledge of clinical guidelines for antenatal care (ANC); the effect of P4P on actual ANC practice; and whether P4P can contribute towards a lower knowledge-practice gap in Tanzania.

Methods: A controlled before and after study assessed the impact of P4P over a 13 month period in the seven districts in Pwani Region where P4P was being implemented, as well as in four neighbouring control districts with no P4P. 150 facilities were sampled, 75 facilities each in intervention and comparison sites; 1-2 health workers were sampled at each facility, and 20 households with a woman who had delivered in the previous 12 months from the catchment area of each facility, 1,500 per study arm. We measured provider knowledge of the clinical guidelines for an ANC visit using clinical vignettes. Practice is defined as the actual procedures performed by the provider on patients (adherence to protocol) as reported by women in the household survey. The knowledge–practice gap is defined as the difference between the knowledge and practice share of clinical guidelines for an ANC visit. A difference-in-difference (DiD) identification strategy is conducted to assess the independent effect of P4P on knowledge, practice and the inefficiency gap using Ordinary Least Squares with clustered standard errors at the facility level and facility level fixed effects.

Results: P4P had a significant effect on knowledge levels, with an overall increase of 17.6% on the knowledge score. In terms of practice, there was a significant positive effect on practice in relation to drug administration during antenatal care, however, across practice overall there was only a borderline effect. Due to the greater increase in knowledge than practice, the inefficiency gap increased across all dimensions of care except for drug administration where there was no change in the gap.

Conclusion: The study indicates the potential effect of P4P on provider knowledge, the effects on practice were limited to those aspects of care that were directly incentivised. In order for the programme to translate into efficiency gains, greater practice gains would be required, and may be observed over a longer time frame.
Nagesh Borse, US Agency for International Development (USAID), United States
Abstract ID: 1398

Making The Impossible Possible: USAID/Kenya’s Efforts in Creating a Country-owned Supply Chain Management Agency: Kenya Medical Supplies Authority (KEMSA) in Kenya

Co-authors: James Batuka, John Munyu, Rene Berger, Nagesh N Borse, USAID/Kenya, Nairobi, Kenya; KEMSA, Kenya; USAID/Washington DC, USA

Background: Adequacy of medical supplies is a significant predictor of overall patient satisfaction with public health systems. Before 2008, Kenya had over 10 parallel supply chain systems that served different health program areas and supplied different commodities. The system was marked by poor service levels that led to overstocks of some while stock-outs of other commodities, leading to lack of trust and poor customer satisfaction. The objective of USAID/Kenya was to invest in establishing and supporting single country-owned supply chain management system in Kenya.

Methods: Since 2008, USAID/Kenya has been working with the Kenyan authorities in various capacities such as supporting legislation to help establish an autonomous local organization; provide technical assistance to create planning and forecasting department; investment in infrastructure and latest technologies and supporting improvements in overall organizational performance using various process improvement techniques.

Results: USAID/Kenya’s efforts with the Kenyan authorities established the KEMSA Act 2013 which created Kenya Medical Supplies Authority (KEMSA) as a state corporation with a mandate to procure, store and distribute drugs and supplies and to engage and support county government’s supply chain needs. This act permitted KEMSA to absorb multiple parallel systems into one supply chain system and to enter into partnerships with local as well as external entities.

The technical support led to successful transition of multiple costly supply chain systems to a single country-owned supply chain which has led to efficient distribution, reduced lead time and minimized stock-outs. KEMSA now has higher order fill rates in excess of 85% for essential medicines and medical supplies and over 98% for donor-supported commodities. Delivery lead times have significantly improved to about 2 days while order turn-around time is about 7 days. Stock holding has also been optimized with stocks at the national level being about 7 months of stock. This has led to lower inventory costs and minimalize overall wastage.

Conclusions: USAID/Kenya’s technical and financial support has led to successful creation of KEMSA, the first country owned and well-functioning supply chain system in East Africa. KEMSA is now as an award winning public health supply chain institution, reformed to be efficient, effective and self-sustaining as it is owned and operated by Kenyan staff. KEMSA’s structures and systems have resulted in a state-of-the-art organization, grown stakeholder confidence in KEMSA’s abilities to deliver. Many development partners as well all 47 county governments have chosen KEMSA for their future supply chain needs.
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Abstract ID: 1819

Global Inequities in Health Policy and Systems Research

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Background Twenty-five years ago, the Commission on Health Research for Development showed that health research contributed little to health and development in low-and middle-income countries, because it matched poorly with needs in the global South, was dominated by researchers from the North and had a narrow biomedical focus. These research inequities inspired a movement that sought to better orient health research to global needs, which in 2008 recommended increasing investments in Health Policy and Systems Research (HPSR) and the organisation of a global symposium. From the start, these symposia focussed on improving health systems in low-and middle-income countries. Our study set out to assess the current state of research inequities in HPSR by analysing the research presented at the previous global symposia on health systems research.

Methods With a team of 112 students from 20 different countries, we systematically analysed 1816 abstracts, presented at the global symposia in Beijing and Cape Town, and the participant lists from all three global symposia. For each abstract we assessed the topic(s), study population, the country in which data were collected, country and gender of the authors, methods used, and the affiliated organisations.

Results While we observed a promising gender balance and substantial contributions from China, India, and South Africa, several worrying inequities remain. Thirty-eight percent of the world's countries were never represented in the global symposia and only 3% of the participants came from South or Latin America. Of the 183 participants who attended all three symposia, merely 6% came from a low-income country. Within Africa, over 70% of the primary data were collected in only seven countries: South Africa, Uganda, Tanzania, Kenya, Ghana, Nigeria, and Zambia. While 96% of the primary data were collected in low-and middle-income countries, over 40% of the first authors were based in a high-income country, compared to 10% in a low-income country. Within the low-income country group, still 67% of the first authors were men. Primary data were mostly collected in China, India, South-Africa, Uganda, and Tanzania, whereas the first authors primarily came from the United States, China, India, South-Africa, and the United Kingdom. Of all studies conducted, 114 were specifically oriented towards women, versus three studies explicitly towards men.
Conclusion Despite a promising gender balance, disturbing inequities in global health research remain. More efforts are required to move beyond these traditional patterns and work towards a more equal and inclusive HPSR field and community.
Ivy Bourgeault, University of Ottawa, Canada
Abstract ID: 2241

Resilience to the Consequences of Health Worker Migration: Policy Responses in Four 'Source' Countries (Philippines, India, South Africa & Jamaica)

Co-authors: Ivy Lynn Bourgeault, Ronald Labonte, Gail Tomblin Murphy, Corinne Packer, Vivien Runnels, University of Ottawa; Dalhousie University

Background: It is a well-established fact that health worker migration (HWM) from developing to developed nations has risen in response to a range of social, economic and political factors. Concerns have been expressed with the consequences of this shift in human resources for health (HRH) for the overall sustainability of health systems in many ‘source’ countries. Our research team examined these issues in the Philippines, India, South Africa and Jamaica. We were interested at the outset in the trends of HWM, their consequences and the range of responses that various policy decision-makers can and have undertaken to stem the tide of emigrating workers.

Methods: The data for this paper were gathered in three phases across the four counties from 2011 to 2014: 1) Scoping review of the published literature and policy documents going back to 2000; 2) Interviews with 144 key stakeholders representing a range of professional and policy community interests; 3) Surveys of 4400 health professionals (e.g., doctors, nurses, midwives, pharmacists, dentists, etc.). Complementing the country-based data were interviews and the analysis of policy documents from key international organizations gathered in the summer of 2013.

Results: In the words of one stakeholder that “you cannot discuss migration without discussing health system issues.” This was reflected in the push factors encouraging workers to migrate (most related to health system resources and national economic policies), to the consequences of their migration to those that stayed and the health system more broadly, to the policy responses either envisioned or utilized. We were surprised by the sanguinity of some stakeholders to the impact of HWM on broader HRH issues. Even if they could intervene to stem the tide of migrating health workers, many informants thought that this would not solve their broader HRH issues which related to maldistribution, overall shortages, inadequate health system financing, and insufficient employment options. Stakeholders in the Philippines, for example, invested sizeable resources in maximizing labour market integration of their migrating health workers in destination countries, given the country’s dependence on remittances. The South African case did reveal the efficacy of policy levers to retain nurses, notably improved wages, but this retention was also influenced in part by declines in market pull from key destination countries.

Conclusion: HRH shortages worldwide are predicted to increase. HWM can be seen as both causing and being caused by broader HRH and health system management issues in both source and destination countries.
Derick Brinkerhoff, RTI International, United States

Abstract ID: 663

**Social Accountability in Frontline Health Service Delivery: Citizen Engagement and Provider Response in Four Indonesian Districts**

Co-authors: Anna Wetterberg, Jana C. Hertz, Derick W. Brinkerhoff, RTI International

**Background:** Frontline public services are where service providers and citizens interact. The quality of those interactions influences service utilization, citizen satisfaction, trust in government, and ultimately service outcomes. Service delivery improvement incorporates both supply- and demand-side interventions: social accountability (SA) is an increasingly popular tool intended to channel demand and reinforce accountability. Two key issues arise. First under what conditions do these tools effectively communicate citizen needs and hold frontline service providers accountable? Second, what affects the extent to which their use persists beyond initial introduction and is sustained? This study explores these questions, examining SA in Indonesia, where the USAID-funded Kinerja program has been implementing service delivery improvements (2010-2017). We assessed four districts’ experience with three SA tools introduced in primary health centers: 1) a user complaints survey; 2) a service charter 3) a multi-stakeholder forum.

**Methods:** We used a comparative case methodology at the site- and district-levels (15 health centers and 4 districts). Limiting the analysis to a single country held national policies constant, but the cross-district and cross-site analysis allowed for local variation in the factors of interest. In 2014, we conducted 60 group and individual interviews with civil society, health center staff, district officials, Kinerja staff, and local organization staff. Data were collected on context, SA implementation, replication, and outcomes; supplemented with document and monitoring data. Interviews were coded with ATLAS.ti software to allow for content analysis.

**Findings:** Citizens’ willingness to engage in SA was important for implementing SA. There was some influence of past history of SA efforts, which laid the groundwork for Kinerja’s technical assistance. The enabling environment for citizen engagement and the willingness of state bureaucrats to support SA, combined with the rule of law, stand out as important. State actors’ perceptions of the appropriate role of citizens varied. However, one striking finding was that local governments and health centers successfully implemented the SA tools and demonstrated responsiveness to service users both in positive and in negative contexts, which confirms that micro-contexts matter.

**Conclusions:** Our findings demonstrate the need not only to change provider attitudes to engender responsiveness to citizen feedback and improve service delivery, but also to continue to strengthen citizen engagement to sustain accountability. We conclude that long-term sustainability of citizen engagement in accountability relationships will depend upon alignment of providers’ and citizen’s expectations, along with supportive institutional incentives.
Elias Bunte, REACH Ethiopia, Ethiopia
Abstract ID: 1463

Community engagement for maternal health: lessons learned from southern Ethiopia

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Background: Ethiopia has a unique approach for community participation, embedded in its health policy. Within the Health Extension Program, two community participation structures have been established: the health development army (HDA) and the pregnant women forum (PWF). Health extension workers (HEWs) facilitate monthly HDA and PWF meetings. As part of a quality improvement intervention to enhance responsiveness and resilience of the health system, HEWs received trainings, guidance and supervision focused on facilitation of these meetings. This study aimed to evaluate the intervention and explore the perceptions of involved stakeholders regarding efforts to enhance community participation.

Methods: We conducted a mixed method study in Shebedino district, Sidama Zone, southern Ethiopia. We explored the perceptions of different stakeholders on the content and functionality of the HDA meetings and PWFs by observation of these meetings (15), IDI with HEWs (32), HEW supervisors and managers (8) and FGDs with community members (8). The interviews and FGDs were recorded, transcribed, translated, coded and thematically analysed. In addition, we collected data related to the outputs of the intervention and service utilization, which were analysed using Excel and SPSS.

Results: The attendance of both types of meetings increased over time. The proportion of pregnant women attending the PWF increased by 71%, while the proportion of HDA leaders attending HDA meetings increased by 34%. It was observed that communication during the meetings between the facilitators and attendees became more participatory over the course of the intervention. The HDAs contributed to an increase in the identification of new pregnancies, thereby linking referral between the community and the HEWs. The percentage of pregnant women who came for care and were identified by the HDA increased from 43% to 85%. Generally, the ANC utilization figures went up, from 73% to 77%. Institutional delivery increased from 79% to 83.3%. From interviews with stakeholders involved, it was found that knowledge and awareness about maternal health issues went up. All stakeholders felt that both meetings had led to increased health seeking behavior. The functionality of the meetings were hindered by unmet expectations regarding incentives for HDA leaders, absentees, lack of reporting formats and lack of support from the kebele administration.

Conclusion: With focused training, facilitation guidelines and regular supportive supervision, HEWs are able to stimulate community participation, resulting in better maternal health service utilization. This is important for efforts to reach universal health coverage in Ethiopia.

Key words: Health extension workers, community participation, maternal health, Ethiopia
Barreras a la Afiliación y Re-Afiliación al Seguro Popular de Salud en el Estado de Hidalgo, Mexico

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Antecedentes: En México, el sistema de salud se reformó en 2003 para dar origen al Seguro Popular de Salud (SP) y brindar de un seguro público en salud a la población que no tenía acceso a la seguridad social. A diez años de su implementación persiste 18.1% de la población del estado de Hidalgo sin aseguramiento en salud en 2012. El objetivo del estudio fue identificar las principales barreras a la afiliación y re-afiliación al SP en la población que no cuenta con aseguramiento en salud y afiliada de Hidalgo, para generar evidencia que permita implementar estrategias efectivas que favorezcan la afiliación al SP.

Material y métodos: Estudio mixto cuantitativo-cualitativo, secuencial que desarrollo inicialmente el componente cuantitativo seguido del cualitativo, con triangulación de ambos métodos. El abordaje cuantitativo utilizó información de la Encuesta Nacional de Salud y Nutrición 2012 donde se analizaron los motivos por los que los afiliados al SP de Hidalgo no renovarían su afiliación al término de su cobertura de tres años. El abordaje cualitativo utilizó datos de entrevistas a población sin aseguramiento, afiliada al SP y personal de afiliación del Régimen Estatal de Protección Social en Salud (REPSS) de Hidalgo, que permitió el análisis de discurso de los informantes a cerca de las percepciones del SP, beneficios y limitaciones del seguro y barreras a la afiliación-re-afiliación.

Resultados: Las principales barreras a la afiliación al SP en Hidalgo fueron la falta de difusión del SP y del proceso de afiliación, falta de necesidad percibida de afiliarse al SP y la percepción de falta de calidad en la atención en salud. Por otro lado, las barreras a la re-afiliación al SP fueron el desabasto de medicamentos 38% (IC 95% 17.5-64.1%), falta de atención médica 19.9% (IC 95% 9.1-38.1%) y los prolongados tiempos de espera 18.5% (IC 95% 4.9-49.9%), además de la percepción de falta de calidad en la atención en salud y de cobertura de algunas enfermedades.

Conclusiones: A pesar del esfuerzo realizado por el gobierno mexicano para brindar cobertura de servicios de salud aun continua un sector de la población sin aseguramiento en salud. Las principales barreras a la afiliación y re-afiliación al SP en Hidalgo son de tipo organizacional. Las autoridades del REPSS están en condiciones de eliminar estas barreras para facilitar la incorporación a la población sin aseguramiento en salud al SP.
Stephen Buzuzi, Biomedical Research and Training Institute, Zimbabwe, Zimbabwe
Abstract ID: 2247

How gender roles and relations affect health workers’ training opportunities and career progression in rural Zimbabwe: Implications for equitable health systems

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Background: Although there is increasing attention to the role of gender in health systems, there is limited empirical evidence on how human resources for health are patterned by gender. This mixed methods study sought to assess how gender roles and relations shape the posting, deployment, access to training and career progressions of health workers in rural Zimbabwe.

Methods: Methods included a policy and document review; qualitative life/career posting histories (n=19), key informant interviews (n=11) with human resource managers at different levels, and questionnaires (n=140) administered to older health workers. Quantitative data was analysed with summary statistics and qualitative data was analysed using the framework approach.

Results: The current policy and regulatory frameworks and implementation practices do not address gender differences; review showed no clear policy to address gender. Barriers to training access and career development were shaped by gender roles and norms at the household and institutional level. Access to training in Zimbabwe is based on seniority and years in service. Men tended to be ‘impatient’ with the system and opted for self-funding training courses. In contrast, most women waited their turn to take up training opportunities, and when these opportunities arose, they were sometimes unable to take them up due to gendered family responsibilities. In terms of relocation for career development or new opportunities a clear pattern emerged of wives following husbands. This meant that 67% of males who were transferred stayed close to their families, while women had to resign from their jobs to seek new ones, therefore sacrificing the accruing of years of service required to access training and the opportunity for promotion. Human resource managers preferred to deploy men to very rural areas, with the belief that men will stay in the post longer and not request a transfer. This had clear implications for career advancement as rural postings were discussed as a way to gain a wide range of experiences, and created opportunities for future access to training, invitation to international workshops and promotion.

Discussions/conclusions: Health workers’ training and career progression in rural Zimbabwe is shaped by gender roles and relations within households and institutions. Men and women were affected differently by the posting and deployment systems. Men faced fewer barriers compared to women but the systems were not responsive to the inequities. This study concludes that women’s career progression is shaped by both the posting and deployment systems and their family roles and responsibilities.
Theoretical Application Assessing Adaptation of District Health Information System (DHIS 2) for HIV/AIDS Surveillance in Uganda

Co-authors: Denis Akankunda Bwesigye, Makerere University School of Public Health

Background: With support from the United States government, Uganda introduced the District Health Information Software 2 (DHIS2) in 2012 to improve surveillance for better prevention and treatment of HIV/AIDS. However, districts have yet to fully adopt this system given a 70.2% reporting completeness attained nationally between April-June 2013. To get a deeper understanding of how Uganda has been progressing in the implementation of its DHIS2, this study applied the Boundary Objects and Social Order theories.

Methods: The study has one dependent variable: Districts’ reporting completeness and four independent variables. 1) Number of client visits; 2) Number of district health units; 3) Number of NGOs delivering HIV and AIDS services; and 4) Regional location. These data were collected from inpatient, outpatient, and maternal newborn health programs.

Findings: Districts reporting the lowest number of client visits (under 2500) attained the highest mean reporting completeness (81.6%), whereas a range of 2501-5000, or over 5001 client visits recorded 72.4% and 51.7% respectively. The higher the number of client visits the lower the reporting completeness (p<0.0005). Districts that were receiving support from only one NGO recorded a mere 56.7% whereas those from two recorded 67.2%. Districts supported by over three NGOs had the highest (80.6%) mean reporting completeness score. The number of NGOs was statistically associated with reporting completeness (p<0.0005). The number of health units operated by a district was also significantly associated with reporting completeness (p<0.0005). The regional location of a district was not associated with reporting completeness (p=0.674).

Conclusion: Results of this study suggest that districts with higher patient volume for HIV and AIDS services should be identified and targeted with additional NGO support. Newly funded NGOs should be established in districts operating over 40 health units. Incomplete reporting undermines identification of HIV-affected individuals and limits the ability to make evidence-based decisions regarding program planning and service delivery for HIV prevention and antiretroviral therapy for this needy population.

Keywords: Health information, Uganda, HIV, AIDS
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Abstract ID: 843

Proyecto Equity-LA II: Avance en la resolución de problemas de coordinación en redes de servicios de salud en Veracruz, México, estudio de línea base.

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Antecedentes: La resolución convencional de problemas de los servicios de salud en México es poco efectiva pues se realiza de manera vertical. Equity-LA II es un proyecto internacional de investigación cuyo objetivo es evaluar la efectividad de estrategias de integración de la atención en la mejora de la coordinación entre niveles, fundamentado en el análisis de dos variables: coordinación y continuidad de la atención. Incluye el componente Investigación-Acción Participativa (IAP) que mantiene el involucramiento constante de los profesionales, gestores de servicios, usuarios e investigadores, recuperando el punto de vista y experiencias de estos para mejorar el impacto de acciones. El estudio se realizó en los Servicios de Salud del estado de Veracruz, México.

Metodología: Diseño mixto, cuasi-experimental, con enfoque IAP, organizado en tres etapas: estudio diagnóstico de línea base, diseño e implementación de la intervención, y evaluación de su impacto. Se desarrolló con profesionales de salud y usuarios con patologías crónicas. Las redes de estudio pertenecen a los municipios de Xalapa (red intervención) y Veracruz (red control).

Resultados: Para el estudio cuantitativo de coordinación la muestra fue de 185 médicos encuestados, para el cualitativo, 28 entrevistas y 3 grupos focales; en la red Veracruz, se realizaron 180 encuestas, 26 entrevistas y 5 grupos focales. Los profesionales señalaron una escasa recepción del formato de contrarreferencia y un manejo deficiente del formato de referencia por parte de los médicos generales, desacuerdos en los criterios de referencia y barreras de acceso al segundo nivel, así como desconfianza de los médicos especialistas hacia los generales.

Para el estudio cuantitativo de continuidad en la red Xalapa, el tamaño de muestra fue de 392 usuarios encuestados, para el cualitativo, 12 entrevistas y 2 grupos focales; en la red Veracruz, se realizaron 397 encuestas y 11 entrevistas. Los pacientes percibieron una limitada comunicación entre médicos generales y especialistas, un mayor uso del formato de referencia en comparación al de contrarreferencia, falta de expedientes clínicos compartidos entre niveles y la principal barrera de acceso a la atención especializada es el diferimiento de citas.

Conclusión: El estudio de línea base encontró como problemas principales la limitada transferencia de información entre médicos generales y especialistas además de desacuerdos sobre criterios de referencia. Los resultados señalan una oportunidad para explorar otros mecanismos que mejoren la coordinación asistencial. Actualmente el equipo de profesionales e investigadores se encuentran en el proceso del diseño de la intervención a implementar.
Romelei Camiling, Kalusungan ng Mag-Ina, Inc (Health of Mother and Child), Philippines

Abstract ID: 2498

Do not look away yet, mothers are not breastfeeding. Revisiting the normative discourse from a health systems perspective.

Co-authors: Romelei Sanchez Camiling, Kalusungan ng Mag-Ina, Inc (Health of Mother and Child)

Human milk is a universally prepositioned public health intervention. Breastfeeding is the single most effective way to prevent child deaths under age five, averting 823,000 annually. Yet, global exclusive breastfeeding rates had negligible improvement for the past 20 years, currently at 35.7% despite policies and actions in place. While preventive interventions like vaccines are being delivered to communities at great lengths, complex barriers have been taking away human milk from mothers and babies.

The stakes for societies are high. Mounting evidence links ‘not breastfeeding’ to current global health threats: obesity, diabetes and certain cancers. Breastfeeding is a prerequisite for optimal cognitive development, reflecting on higher adult earning potential. Biological mechanisms are consistent with these long-term outcomes.

Rising labour force participation among women, and poor workplace maternity protection makes optimal breastfeeding inconvenient, if not impossible. Societies view breastfeeding as a lifestyle choice. Unethical marketing facilitates the wrong impression that formula milk is a suitable, if not an equal alternative. Health systems promote that “breastfeeding is best” but often, mothers are left to figure out how to do so.

The normative discourse on breastfeeding promotion reflects these gaps, and should be revised.

Breastfeeding promotion hints that breastfeeding is not the norm, thus requiring promotion. Framing of current messages mirrors this assumption. In reality, breastmilk is not better than formula. Formula is suboptimal to breastmilk. Breastmilk does not reduce risks. Rather, it allows infants to survive and thrive while formula harms them.

Promotion is often interpreted as behaviour change communication, at the risk of missing out on important components such as policy change and service delivery. Breastfeeding promotion also requires protection and support. Preventive strategies should prevent mothers from not breastfeeding and from giving up breastfeeding. These strategies should be embedded within health systems and reach mothers in effective and timely ways.

Breastfeeding promotion is poorly defined in literature. The continuum of strategies is often loosely aggregated under this heading, as if it were a single homogenous intervention. This makes evaluation challenging.

Despite a large body of published material on breastfeeding, including the recent Lancet Breastfeeding Series, no widely accepted framework organizes the issue from a health system perspective. Using the normative arguments outlined, a conceptual model of breastfeeding is proposed using the dynamic health systems framework. Framing breastfeeding in a way that resonates with programme managers and health systems researchers is expected to facilitate more responsive service delivery and evaluation.
Melissa Cardinal-Grant, University of Alberta, School of Public Health, Canada

Abstract ID: 950

Midwifery in Canada's North: A review of the loss of indigenous birthing practices and a call for reformed service delivery.

Co-authors: Melissa Cora Cardinal-Grant, University of Alberta, School of Public Health

Purpose: To initiate interest and advocacy for improved, midwife-driven maternal primary health care services in northern, rural, and/or remote Canadian regions.

Focus/Content: Prior to the implementation of the current health system in Canada, child birth for Aboriginal women was a significant event in the community. Besides being a major life milestone, there were cultural practices, ceremonies, and celebrations surrounding the birth of a child that would bring entire communities together. There has been widespread loss of these cultural practices and indigenous birthing knowledge. This is primarily due to the current accepted practice of transporting pregnant women from remote communities to larger centers for the delivery of their baby. At an individual level, a woman is isolated and vulnerable when she is by herself in an unfamiliar place, often waiting days or weeks to go into labour. She is more likely to have a poor birthing experience in this isolated state as she is separated from the traditional support of her community. These remote communities having "lost births" has exacerbated the gradual loss of indigenous knowledge and culture stemming from colonization and Indian residential schools. One must also consider the wider social and spiritual effects of lost births within the community. Birth and death events are both associated with community mobilization; taking birth away has resulted in imbalance, and death weighting heavily on the scale.

What this review attempts to address is the lack of maternal primary health care that contributes to the lost births issue, service delivery inequities, and an overall poorly-functioning, exorbitant system. It will discuss Canadian midwifery education programs and registration, lack of Aboriginal midwives, and the need for the return of community-based midwives or health-workers.

Significance: Innovative health care is not what currently happens in Canada's North. Transporting residents to hospitals, which are often hundreds of miles away, is not a sustainable health system, nor is it desirable for those residents. Primary health care, especially maternal health, needs to return to the community, and be community-driven. In order for this to be done, current systems need to be dismantled and built anew.
Francesca Cavallaro, London School of Hygiene & Tropical Medicine, United Kingdom
Abstract ID: 1449

Change in stock availability of family planning commodities after supply chain intervention: use of annual health facility surveys in Senegal

Co-authors: Francesca L Cavallaro, Adama Faye, Caroline A Lynch, John Bradley, London School of Hygiene & Tropical Medicine; Université Cheick Anta Diop

Background. Stock-outs of essential medical commodities over the last decade have highlighted weaknesses in the supply chain in low- and middle-income countries. Attention has turned towards interventions strengthening medical supply chains, but the evidence-base is limited. The Informed Push Model was implemented in Senegal from 2012 to present with the aim of reducing contraceptive stock-outs in facilities. As part of a rigorous multi-disciplinary evaluation, this study examines changes in contraceptive stock availability in facilities after implementation of this supply chain intervention.

Methods. We use Service Provision Assessments (SPA) – nationally representative surveys of health facilities – conducted annually in Senegal since 2012/13, collecting information on stock availability of 10 contraceptive methods. We will estimate the proportion of facilities with available stock for each contraceptive method, before and after implementation of the intervention, by region, urban/rural location, and facility. The change in percentage of facilities with all 10 methods available, and with both pills and injectables – the two most popular methods – will also be compared.

Results. Preliminary results from the 2012/13 and 2014 SPAs indicate that the availability of all methods increased across the five regions where the intervention was implemented in 2013, except for progestin-only injectables which were already available in 90% of facilities pre-intervention. The largest gains were observed for IUDs (from 38% to 79%) and emergency contraception (from 30% to 68%). However, the availability of pills and injectables decreased by 5-13 percentage points in two northern regions, leading to no overall change in the percentage of facilities with both methods available. The percentage of facilities with all 10 methods available increased from 4% to 65% post-intervention. This analysis will be extended to regions where the intervention was implemented in 2014.

Discussion. Preliminary findings indicate substantial and widespread gains in the availability of family planning products in 5 regions of Senegal after implementation of a supply chain strengthening intervention, with less progress in two northern regions. Data from the 2015 SPA will help us determine whether these improvements in stock availability occurred nationally and identify any other gaps in implementation. More broadly, our study will contribute rigorous evidence on improving the resilience of medical supply chain systems in sub-Saharan Africa (particularly in response to increases in contraceptive demand), as well as opportunities and lessons learned from using annual SPAs for evaluating complex health systems interventions.
How Franchising affects private practice: a comparison of case-mix, client volume and revenue among private providers in Kenya

Co-authors: Nirali M Chakraborty, Rebecca Simmons, Mwende Mbondo, Metrics for Management; Population Services International; Independent Consultant

Background: Private sector provision of primary health services are an important component of health systems in low and middle income countries. Yet, ensuring quality, assuring access, and increasing service availability is difficult to accomplish within such a fragmented and often poorly regulated sector. Social franchising has tried to improve quality and the range of services available by creating networks of branded, supervised private sector facilities. One such network is the Tunza Family Health Network (Tunza) in Kenya, comprising more than 317 clinics in all provinces since 2009. Research to understand how franchised providers benefit from the intervention has been limited, but is essential to informing whether and how to scale up networked private clinics in the future.

Methods: This study used a quasi-experimental longitudinal design, with randomly selected Tunza providers as designated cases and a randomly selected control group. Control group providers were selected from among private providers eligible for the concurrently occurring African Health Markets for Equity study, but randomly allocated to not receive a franchising intervention for the next 3 years. Baseline data was collected and then both franchised and control group providers reported their patient volume and revenue on a monthly basis for twelve months. A total of 227 providers (77 cases, 150 controls) participated in the study which began in February 2014 and ended in February 2015. Robust multivariate linear regression analyses were conducted, with bootstrapped estimates of standard errors.

Results: Franchised providers served significantly more clients for family planning (48.5 more/month, p&lt;0.01), child health (21.6 more/month, p&lt;0.05) and STI/HIV services (15.9 more/month, p&lt;0.01), although case-mix was not appreciably different between the two groups. Franchised providers made 17,244 Kenyan Shillings/month more (p&lt;0.05), however control group providers had a higher profit margin, due to lower overall expenses (43% vs 36%).

Discussion: Results demonstrate that franchising is associated with increased client volume across a wide range of primary health services, as well as increased revenue as compared to non-franchised private sector providers. Other research has shown that franchising can improve service quality, and access to key health services, such as long-acting and permanent methods of family planning, TB treatment and child health services. This innovative approach to quality improvement in the private sector can also be attractive to providers, potentially resulting in the continuation of social franchising for health services worldwide.
Obstacles and Enablers to the Professional Development of Skilled Birth Attendants: a Case Study of the Shoklo Malaria Research Unit on the Thailand-Myanmar Border

Co-authors: Caroline Chamberland, Ivy Lynn Bourgeault, Rose McGready, University of Ottawa; Shoklo Malaria Research Unit

Background: This study aims to conduct a multi-level analysis of obstacles and enablers to professional development amongst Skilled Birth Attendants (SBA) providing maternity care to migrants and refugees within a self-contained health system at the Thailand-Myanmar Border. By highlighting the obstacles and enablers present within the system, this study purposes to identify means by which to empower lower level SBAs, support their professional development, and create a more sustainable maternity workforce. As the Shoklo Malaria Research Unit (SMRU) is a non-governmental entity, providing care which is parallel to, and independent of, the official health care system, it constitutes a microsystem which plans and implements all of its functions at the local level. Accordingly, this research project can contribute a more holistic, dynamic and nuanced representation of the interacting factors affecting the professional development of SBAs at all levels of a given health system.

Methods: In addition to a system-level analysis of SMRU, this single descriptive case study integrates two of SMRU’s Birthing Units as embedded units of analysis. A template-based personnel file review and non-participant observation enabled the development of a descriptive framework of maternal Human Resources for Health at both sites, and informed interview and focus group protocols. Separate focus groups were conducted with each shift of SBAs at each site, and individual interviews adopted stratified purposeful sampling in order to identify information-rich cases at each level of accreditation.

Results: The SBAs at both sites demonstrated exemplary teamwork, which serves as a strong motivational factor in addition to their desire to help their community. Conversely, the SBAs demonstrated a considerable aversion to negative feedback; complicating the performance management process. This case study provides an example of a SBA workforce that has been provided with the appropriate midwifery skills to fulfill a limited scope of practice, and is now ready and eager to gain complementary skills in order to better meet the needs of its patient population.

Conclusion: In a context of perpetual instability, achieving workforce sustainability will require a balance of appropriate and constructive consultation with obstetricians without enabling the stagnation of SBAs’ leadership, ownership and analytical skills, in order to make optimal use of available Human Resources for Health. However, in the case of SMRU, persistent recruitment and retention concerns reveal that workforce sustainability cannot be achieved through professional development alone. Therefore, this study presents a model for SBA workforce sustainability that integrates recruitment, retention, and professional development considerations.
Nidhi Chaudhary, Public Health Consultant, India, India
Abstract ID: 2426

Tarang Clinics Network – Designing a social entrepreneurship model for primary health care for urban poor in India

Co-authors: Nidhi Chaudhary, Public Health Consultant, India

Background: Nearly 60 million Indians are pushed into poverty each year as they pay their hospital bills. The government health insurance scheme for below poverty line individuals does not cover outpatient care and preventive healthcare. 70% of people access private health care. Currently on an average, the lowest quintile in urban areas is spending USD 8 per non hospitalized ailment while the richest quintile spends nearly double of that. However, often the first contact provider and the money spent is on an unqualified provider for the urban poor.

Methods: A review of the secondary data on existing non-governmental primary health care models was done to study different service delivery models and the challenges that they face. A qualitative research to understand the health care seeking behavior, provider preferences, factors influencing the choices and expenditure on ambulatory care was done. Participatory research in action was used and study was done in three urban poor settlements in Chandigarh, India. Six focus group discussions were done with men and women separately and free listing and sorting was used.

Results: There are very few comprehensive primary care delivery models are for urban poor. The research in urban poor settlements in Chandigarh showed that people preferred fee for service from private providers to free government services. However, the first contact private providers are often unqualified informal sector providers. The range of average expenditure for outpatient care per ailment is USD 2.5-8, usually a bundled fee for doctor consultation and medicines, while fee for diagnostics is separate. The factors influencing provider preference include proximity to their residential area, affordable with flexible payment options including credit, perceived better quality, provider listens and timings are suitable with short waiting periods.

Conclusion: Based on the findings, a self-sustaining social entrepreneurship model for primary health care delivery has been developed. A network of outpatient clinics will be established for affordable basic curative, preventive and promotive health services provision by qualified doctors, basic diagnostics and medicines. A hub and spoke fee for service model is proposed wherein 6 satellite clinics with family physicians in the urban poor settlements and one main clinic with specialist out-patient care catering network clients at subsidized fee and lower middle class families will be established. The revenue generated will break even and sustain clinic operating cost in 18-24 months. The first satellite clinic is scheduled to start in July 2016 for proof of concept learnings.
Zorinsangi Chhakchhuak, National Institute Of Epidemiology, India
Abstract ID: 2578

**Contribution of Non-communicable disease to the causes of death in Lunglei town, Mizoram, 2014-15**

Co-authors: Zorinsangi Chhakchhuak, National Institute Of Epidemiology

**Background:** Non-communicable diseases have become the leading cause of mortality globally as well as in developing countries like India. Mortality data is useful for prioritizing the health problems and to appropriately allocate resources and further evaluate health programs. There is an urgent need for reliable quantification of causes of death to guide the recently launched National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was launched recently in Mizoram.

**Method:** We did a cross sectional study of deaths among adults above 15 years of age occurring in a one year period at Lunglei town, Mizoram. We proposed cluster sampling with a sample size of 197 deaths. However, we surveyed all the deaths in Lunglei town. Data was collected regarding cause of death using verbal autopsy tool along narrative history. The cause of death and International Classification of Diseases (ICD) 10 were assigned by two medical doctors independently.

**Results:** We surveyed 239 deaths. Overall 46% of the deceased were 30-59 years of age at the time of death, majority (99%) belonging to scheduled tribe community. Overall, NCDs were the major cause of death (72%) as compared to infectious diseases (13%). Neoplasm was the leading cause of death (27%), stomach being the most common site. The second major cause of death was disease of the circulatory system (20%) which along with neoplasms contributed majority of deaths in middle and older age groups in those above 44 years. Behavioral risk factor like smoking was highly prevalent among both males (73%) and females (43%). Deaths due to external and mental/behavioral causes collectively contributed half of deaths in younger males below 30 years.

**Conclusions:** Non-communicable diseases such as neoplasms and circulatory system diseases were the leading causes of mortality.

**Recommendations:** Interventions incorporating community engagement and participation should be developed to address behavioral risk factors and to strengthen ongoing NPCDCS program in the district for NCDs.
Sergio Chicumbe, National Institute of Health, Ministry of Health - Mozambique, Mozambique  
Abstract ID: 3115

**A Snap Shot Assessment of Complex Obstetric Care at Rural Hospitals of Mozambique, 2015**

Co-authors: Sergio Chicumbe, Jose Chidassicua, Carlos Botao, Humberto Rodrigues, Amir Moodan, Francisco Mbofana, National Institute of Health, Ministry of Health - Mozambique; Ministry of Health - Mozambique; UNFPA, Mozambique

Background: The Ministry of Health of Mozambique implement a mother and child health program, largely conceptualized on the World Health Organization recommendations for emergency obstetric care. Policies allow rural hospitals being equipped to respond to major causes of maternal and perinatal complication through supervisi, trainings and commodities allocation across Mozambique. Serving large catchment areas, rural hospitals in Mozambique are the level needed the most for comprehensive response to perinatal complications. Characterization of complicated cases cared for at this level is important to inform policies.

Methodology: A snap shot approach enrolled consecutively the last 10 complicated cases cared for at total of nine rural hospitals from Inhambane (South), Zambezia (Center) and Cabo-Delgado (North) provinces in Mozambique. Cases were criteria based audited to evaluate profile and the care. Data were analyzed by descriptive statistics.

Results: Mean age of cases was 23 years (SD= 7.2 years), 95% (86) had antenatal care, 83.3% (75) required Cesarean-section, being 93% (83) admitted in stable condition. HIV information was not recorded for 46.7% (42) of cases, being 18.8% HIV positive among those with results. Records indicated 20.5% (18) stillbirths; 50.6% of delivered babies were females, 16.5% (13) were low birth weight. Obstructed labor, Perinatal Asphyxia, Eclampsia and Hemorrhage were main complications recorded with proportions of 28% (19), 25% (17), 16% (11), 16% (11) , respectively. In 23% (18) of cases, complications could have been predicted early, even so, overall 87.6% had adequate management after being admitted to hospitals. Anamneses was performed in 67% (60) of cases, obstetric physical assessment in 70% (63) of cases, repeated obstetric monitoring in 64% (58) and auxiliary assessments (laboratory) in 56% (51). Seventy three percent (52) of cases were jointly managed by nurses and surgery technicians, being none with involvement of medical doctors or medical assistants.

Conclusions

Despite maternal and child health being a priority in Mozambique, major challenges remain at rural areas. Results suggest that relatively young women are facing obstetric complications in rural Mozambique and the proportion of HIV is very high. Access to antenatal care occur, complex cases are being admitted to hospitals in stable medical condition, even so opportunities for screening HIV are missed and the proportion of stillbirths and low birth weight is high among complicated cases. Overall a third of complicated cases do not receive comprehensive monitoring as per the protocols and complex cases worload is skewed to nurses.
Peer and group supervision for improving motivation and performance of Health Surveillance Assistants: Lessons from a quality improvement intervention in rural Malawi

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Background: Community Health Workers (CHWs) are key to both resilient and responsive health systems. Health Surveillance Assistants (HSAs) in Malawi are the core cadre extending health services to communities. Their performance is hindered by poor supervision, which tends to be irregular and unsupportive. To improve these supervision related challenges, we piloted an innovative peer and group supervision approach in hard to reach areas in two districts in Malawi. The peer supervision involved block leaders (often senior HSAs) meeting fortnightly with small groups of HSAs. This was combined with monthly larger group supervision meetings at the health centre level. All supervisors were trained in supportive supervision approaches including in providing feedback, mentorship and problem solving. This study assesses the perceptions of the impact of the intervention on motivation and performance of HSAs.

Methods: Qualitative methods were deployed to assess the intervention. We employed a number of tools including a programme assessment tool, in-depth interviews with HSAs and their supervisors, and Focus Group Discussions with communities. Key informant interviews were conducted with health system managers and professionals. All qualitative data were recorded, transcribed, translated, coded and analysed thematically.

Results: The peer and group supervision brought improvement in frequency and approach to supervision. HSAs perceived the ‘block model’ to be the most supportive as it enabled a good working environment and promoted team work as their performance was assessed both as individuals by the block leaders and as a group by health centre level supervisors. The approach provided opportunities for cross learning, skills sharing and promoted better coordination of activities (particularly from vertical programmes) at community level. HSAs felt block leaders and Senior HSAs were better empowered in providing supportive supervision compared to district level supervisors and that supervision from cluster and district-level supervisors had dwindled. Ongoing health systems challenges remained: HSAs reported that factors such as high workload, shortage of drugs and transport constraints contributed to demotivation.

Discussion and Conclusion: Innovations in strategies to support CHWs are critical. In Malawi group and peer supervision approaches are contributing towards supervision that is more supportive and promoting a more collective approach to work, with the potential to enhance both HSA motivation and
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performance. However, for the approach to have more impact, supervision needs to occur at all levels (including district) level and be embedded in broader district health systems strengthening approaches.
Yotamu Chirwa, Biomedical Research & Training Institute, Zimbabwe
Abstract ID: 1090

**Fostering development of sustainable incentive policies for a resilient health workforce: Lessons from post crisis Zimbabwe.**

Co-authors: Yotamu Chirwa, Pamela Chandiwana, Mildred Pepukayi, Wilson Mashnage, Malvern Munjoma, Shungu Munyati, Sophie Witter, Biomedical Research & Training Institute; Queen Margaret University

Background: Health worker performance is arguably the most critical factor affecting access to and quality of care and health system resilience. In countries emerging from crisis the tendency is to formulate rapid policies that address the most conspicuous maladies to health worker retention. In Zimbabwe, during and after the crisis, providers instituted a range of monetary and material incentives. These incentives achieved good results in the immediate post crisis period. We carried out an exploratory study which examined how incentive environments evolved during and after the crisis, what influenced the trajectory, what the reform objectives and mechanisms were, and the intended and unintended effects with regards to access and quality of care.

Methods: The research used mixed methods. 76 documents and academic publications were reviewed. Twelve key informant interviews at national level and 16 in three districts in government, municipal and mission facilities were conducted. Thirty five career histories and a survey with 267 health professionals were done.

Results: The implementation of incentive policies is critical for the health system and, if done badly, can cause long term health workforce problems. Differential remuneration across key providers has led to underutilisation of available skills. Cadres in the government and mission sectors received a total median hourly rate of $1.57 and $1.40 per hour respectively compared to $8.13 per hour in the municipality. Furthermore the average total income in government and mission sector comprises about 50% net salary and 50% allowances, compared to 75% net salary and about 25% allowances in the municipality. This attracts health workers from the rural areas to the municipalities which run primary care centres in urban areas. Rural areas were deprived of needed health workers during the crisis, creating system wide inefficiencies and inequities in providing service. The concentration of highly skilled health workers in low level health facilities that refer complicated cases to large public sector facilities with less skilled and experienced staff distorts the referral system.

Conclusions: Health worker incentive policies require an integrated approach to avoid remuneration asymmetries and avert maldistribution. Loss of skilled and experienced health workers from sectors offering poor incentives to those that have superior incentives affects the poor most, increases costs of health services and weakens the health system. Incentives that are long term in nature, transparent, and reward skills and performance increase the resilience of the workforce.
Strategies to assess quality of integrated management of newborn and childhood illnesses (IMNCI) and supporting system functions in Low and Middle Income Countries (LMICs)

Co-authors: Tamar Chitashvili, Mirwais Rahimzai, Nicholas Mwanja, University Research Co. LLC; University Research Co. LLC

Background: Pneumonia, diarrhea and malaria are the leading causes of death (14%, 10% and 7% respectively) in children under five globally. Despite significant achievements, many obstacles continue to hinder effective national response against common childhood conditions in LMICs, including Uganda. One of the main challenge is the lack of understanding of the essential service delivery and supporting system gaps at facilities.

Methods: To assess quality of IMNCI at outpatient settings and initiate improvement interventions, United States Agency for International Development (USAID) Applying Science to strengthen and Improve Systems project conducted rapid assessment of IMNCI in 10 facilities of North Uganda. The assessment focused on availability of essential inputs (including infrastructure, commodities, human resources) and compliance with evidence-based IMNCI practices through inventory and medical documentation review and structured provider interviews.

To identify essential gaps in severity assessment, classification and counselling practices that were not documented in selected facilities, the project also conducted baseline assessment of IMNCI through direct observation on outpatient visits of all children under 5, randomized assessment of medical documentation and assessment of knowledge and practices of care providers.

Results: Rapid assessment revealed gaps in essential IMNCI inputs and absence of medical documentation around severity assessment, classification and counselling practices of common childhood conditions. Without direct observation on visits, it would be impossible to properly assess the quality of IMNCI and initiate improvement interventions.

The baseline assessment revealed substantial gaps in severity assessment and classification and vaccination counselling practices (less than 3 during the outpatient visits resulting with only 23% of children fully immunized at their age. The assessment also found that despite overall good availability of essential antibiotics, irrational use of medications was widespread practice; 90% of young infants with dehydration and 43% of newborns with signs of serious infection were improperly treated; Unjustified antibiotic treatment was prescribed to 83% of children with cough or cold and to more than 50% of children with RTIs, Malaria and Diarrhoea were treated with non-evidence-based antibiotics.

Conclusions: Combination of different data collection methods are essential to understand essential IMNCI service delivery and system gaps in LMICs, particularly where medical documentation is poor. These results have potential to guide evidence-based decisions at facility and health systems level.
While global action plans (GAPPD, WHO QoC Framework) focus on increased availability of antibiotic treatment, irrational use of antibiotics become widespread practice even in low resource settings and require immediate national and global response.
Nellisiwe Chizuni, University of Zambia, Zambia

Abstract ID: 2104

The Zambia-Canada Health Research Partnership: reflections on coordinating engagement in North-South partnership

Co-authors: Nellisiwe Luyando-lupati Chizuni, Jessica Berker, Fastone Goma, Stephanie Nixon, Vic Nuefeld, Abby Speller, University of Zambia; University of British Columbia-Okanagan; University of Toronto; Canadian Coalition for Global Health Research; University of Manitoba

Purpose: A lack of organization had a significant impact on the effectiveness of Canadian health research efforts in Zambia. Limited communication amongst actors was resulting in fragmentation, leading to logistical duplications, and consequently placing strain on Zambian colleagues. Actors were struggling with their projects in isolation, rather than collaborating to align their efforts and create a more powerful push for change.

Based on a unified interest in harmonizing Canadian-led and funded health research initiatives, the Zambia-Canada Health Research Partnership (known as the “Team ZamCan”) was established in 2011. Team ZamCan is composed of a diverse membership of Zambian and Canadian health researchers, research users, students and health professionals.

Focus/Content: The vision of the Zambia-Canada research partnership is to improve the health of Zambians, by strengthening the national health research system. Activities include strengthening capacities of both partners at the individual, institutional and system levels; and increasing the production and use of research.

The partnership has piloted different communication tools, including a news bulletin, an email listserve and a virtual knowledge platform. The purpose is to facilitate opportunities for (1) Canadian partners to harmonize their efforts more effectively, and (2) for Zambian partners to engage more equitably within partnerships by sharing their perspectives and knowledge about local research needs. Opportunities for engagement also include annual face to face workshops in Zambia and Canada –where all members are encouraged to critically reflect on the Team ZamCan model for global health research harmonization.

Significance for the subtheme/field building dimension of relevance: Though seemingly straightforward, encouraging a level of systematic communication amongst different actors is complicated. The task requires navigating cultural contexts and enabling a stronger sense of connection, understanding and partnership amongst colleagues. Varying styles of communication and access to resources have resulted in Canadians benefitting from some efforts more so than Zambian colleagues.

Despite these challenges, Team ZamCan has improved awareness by providing a structure to help organize actors and their contributions to health research in Zambia. The partnership provides a community of like-minded health researchers with a shared focus on strengthening health systems in Zambia. Junior scholars particularly value the opportunities offered for mentorship.
Target audience: This paper is of particular interest to North-South researchers. The Team ZamCan is one example of how partnerships can strive for more inclusive and equitable interactions. Partners need to methodically, openly communicate and share knowledge in order to align with locally identified research priorities.
Economic evaluation methods for strategic health policy implementation and a journey to healthcare for all: a conceptual framework and a comparative health system study design.

Co-authors: Seongwon Choi, University of Alabama at Birmingham

Purpose: The objective of this presentation is to discuss the conceptual framework for examination of economic evaluation tools employed in the health policy making process across countries that achieved Universal Health Care (UHC) for their citizens. The comparative research examines economic evaluation methods used in countries with UHC in the context of health policy making processes. The study reports outcomes and limitations of economic evaluation methods employed and implications to the global health systems research and health policy research community.

Focus: Based on the UHC health financing scheme and health system objectives developed by WHO and the policymaking processes suggested by Longest (2015), the approach embodies how economic evaluation analysis is incorporated in the health policy making processes under the premise that the policies are to generate the best value of scarce resources. The main focus of this approach is to investigate economic evaluation methods used in the different phases of health policy making processes (ex-ante implementation versus ex-post implementation) and to examine how the results of evaluations are incorporated into policy-related decision making.

Significance for the sub-theme area and target audience: Strategic policy implementation is an area of critical importance for health policy makers as well as global health systems researchers provided that the movement towards UHC is growing among middle and low income countries and the demand for the most cost-effective interventions is ever greater among high income countries. Several countries have successfully incorporated economic evaluation methods for strategic priority setting and policy implementation in order to improve sustainability of the overall health system. Their experiences with respect to inclusion of economic evaluation methods in the policy making processes provide valuable lessons to other health systems. The proposed approach fosters learning from peer countries by providing a conceptual framework that can be employed when investigating how economic evaluation methods are incorporated into policy making processes. The approach also allows to visualize the relative effectiveness of evaluation methods depending on the timing they are incorporated into the policy processes. Research based on the present conceptual framework compares countries with UHC that utilize economic evaluation methods for health policy making. The research outcomes thus can be a value for health system researchers as well as for health policy makers as it provides knowledge from systematic analysis of economic evaluation tools used in the context of strategic policy implementation in the health system.
Abstract ID: 1040

Building resilient manager leaders in the health system: significance of informal on-the-job learning

Co-authors: Shakira Choonara, Jane Gougde, Nonhlanhla Nxumalo, John Eyles, University of the Witwatersrand, South Africa; McMaster University, Canada.

Background: The district health system (DHS) has a critical role to play in the delivery of Primary Health Care (PHC) and basic health services. Effective district management and leadership are considered to be crucial elements of the DHS. However, the DHS in many developing countries, including South Africa (SA) is characterized by poor management skills. Internationally, the debate around developing leadership/managerial competencies such as motivation/empowerment of staff, managing relationships, being solution-driven as well as fostering a learning environment are argued to be possible through approaches such as formal training and on-the-job learning. Despite growing multi-disciplinary evidence in fields such as engineering, computer sciences and health sciences there remains little empirical evidence of these approaches, especially the informal approach. This paper attempts to draw attention to the significance of informal (on-the-job) learning at a district level and its practical value in developing resilient manager leader competencies.

Methods: A qualitative case-study was conducted in one district in the Gauteng province, SA. Purposive and snowballing techniques yielded a sample of 20 participants, primarily based at a district level. Primary data collected through in-depth interviews and observations (participant and non-participant) was analysed using thematic analysis.

Results: Findings indicate that both formal and informal learning were important in developing management/leadership competencies. Some senior managers described how they learnt to manage either through formal leadership courses or from their own managers/supervisors (informal learning). The majority employed delegation/communication practices they learnt from their managers within their own teams and also fostered learning environments. Such competencies were essential in dealing with both daily and long-term constraints such as bureaucratic procurement processes, limited resources and decision-making power. Managers in this district also saw value in fostering teamwork by training staff on functions outside of their job-description and assigning specific team tasks. Simple managerial strategies such as acknowledging good work of staff through e-mails and the districts’ annual awards ceremony were cited as motivational factors amongst staff.

Conclusion: It is crucial for health systems, especially those in financially constrained settings to find cost-effective ways to developing management/leadership competencies such as being solution-driven or motivating and empowering staff. This study illustrates that it is possible to develop such competencies through creating and nurturing a learning environment (on-the-job training) which could be incorporated into everyday practice.
Key words: Leadership Management Resilience Informal-Learning
Carmen Christian, University of the Western Cape, South Africa  
Abstract ID: 339

Access to healthcare in post-apartheid South Africa: availability, affordability and acceptability

Co-authors: Carmen S Christian, Ronelle Burger, University of the Western Cape; University of Stellenbosch

BACKGROUND: Motivated by disappointing health outcomes, stubborn health inequalities and the global and national prioritisation of universal health coverage, we investigate access to healthcare in post-apartheid South Africa (SA). In the decade following the official end of apartheid, SA’s health policy was primarily concerned with the decentralisation of public healthcare, the expansion of public clinic networks and the abolishment of primary healthcare user fees. Measuring the country’s progress in its endeavour to increase access is critical to ensuring that the road to universal health coverage is as short and smooth as possible.

METHODS: Using 2009 and 2010 General Household Surveys (GHS) data (n=190 164), we propose a reliable, intuitive and simple set of indicators to measure access. These indicators are based on the access framework of Thiede et al (2007) which is comprised of the underlying access dimensions of availability, affordability and acceptability.

RESULTS: Our analysis shows that while a number of individuals still struggle with physical access to clinics, it is associated with remote and rural communities. Affordability does not appear to be a significant impediment to access: fewer than 10% of individuals report paying for their health services. Turning to user acceptability, the analysis shows that a considerable proportion of healthcare users complain about long waiting times, rude nurses and drug stock outs, but then proceed to report that they are satisfied with the service they had received.

CONCLUSION: Overall, our analysis suggests that most individuals in SA have adequate access to healthcare, though room for improvement remains. Innovative solutions may be required to improve the availability of healthcare for remote and rural communities in a cost effective way. We highlight the measurement of acceptability, a demand-side factor, as an important area for further work. Differences between user complaints and satisfaction levels may be attributable to expectations adapting to circumstances. It is flagged as a potential concern to be researched in order to better understand whether low expectations may present an obstacle to initiatives seeking to strengthen local accountability and monitoring systems. Demand-side aspects of healthcare have not received the attention it deserves and arguably provides one of the most significant opportunities to enhancing access and improving health outcomes in post-apartheid SA.
Fiona Chuah, National University of Singapore, Singapore
Abstract ID: 2162

Identifying Health Systems-Level Barriers and Facilitators to the Effective Secondary Prevention, Treatment, and Management of Type 2 Diabetes Mellitus in Singapore: A Patient’s Perspective

Co-authors: Ong Suan Ee, Fiona Leh Hoon Chuah, Jane Mingjie Lim, Helena Legido-Quigley, National University of Singapore; National University of Singapore; London School of Hygiene and Tropical Medicine

In today’s world, Singapore’s health system is widely lauded as effective and efficient. However, the system now faces the triple threat of a rapidly ageing population, low population growth rates, and a burgeoning chronic disease burden. Diabetes is among the five leading causes of disease burden in the country with 12.28% of its 4 million population suffering from diabetes. To inform policy recommendations for health services and systems improvements, the perspectives of patients, particularly the most vulnerable, must first be explored. Hence, the primary aim of this qualitative study was to examine the health systems-level barriers and facilitators to effective secondary prevention, treatment, and management of diabetes among diabetics in Singapore.

Twenty-five semi-structured interviews were conducted with diabetic patients aged 40 and above from the lower socioeconomic status, and their caregivers. We used a thematic analysis approach to allow categories and themes to be induced from the data.

We identified three categories of patients varying in treatment adherence. These include the highly adherent who reported strict compliance to their treatment regimen; the in-betweeners whose level of compliance varied, citing individual stressors like financial and emotional predicaments as major influencers of their behaviour; and the non-adherent who did not keep to their treatment regimens. Most participants reported experiencing no symptoms prior to diagnosis and learned about their condition via opportunistic screening. Most participants were aware of the ways to prevent complications and practiced lifestyle modifications following their diagnosis. However, some had poor understanding on the importance of medication adherence. From the patients’ perspective, barriers in accessing treatment were mainly precipitated by financial difficulties in affording co-payments for medical costs. At the service delivery level, long waiting times were reported and the limited consultation time during clinic visits undermined patients’ openness in sharing information about their struggles in adherence. Key facilitators include access to financial and social support schemes, community and family support, and trust in the healthcare system as a whole. Recommendations to improve diabetes management in Singapore include promoting better doctor-patient communication, improving patient knowledge on national subsidy and support schemes, improving patient understanding on the importance of disease prevention and treatment adherence, increasing financial support, and enhancing social support systems for patients.
This study highlights some of the key issues in the secondary prevention, treatment and management of diabetes in Singapore, which can be effectively addressed through improvements in policy and service delivery within the healthcare and social system.
Heather Cogswell, Abt Associates Inc, United States
Abstract ID: 2323

The Political Economy of Domestic Health Financing in Sub-Saharan African to Achieve the Sustainable Development Goals (SDGs)

Co-authors: Heather Ann Cogswell, Carlos Avila, Abt Associates Inc

Political commitments to mobilize resources for health over the past 15 years have faced challenges, resulting in partially met, or unmet pledges – as of 2015, a mere 6 countries had achieved their political commitment to fulfill the Abuja Declaration. New commitments highlight the need to mobilize additional resources to meet the 17 SDGs. While all 17 goals support health, SDG3 is specific to health and builds on MDG progress by adding non-communicable diseases and UHC to the commitment. We address a critical question: is health financing a relevant political goal to support a country’s overarching SDG commitment to reduce poverty and inequalities?

We analyzed domestic health financing in Sub-Saharan Africa to support the achievement of the SDGs. By applying the political economy framework three major health financing issues emerged from the analysis: (1) governance and fiscal policies, (2) pro-poor health financing and (3) the role of the private sector.

First, a health financing target is not an end on its own and requires complementary governance actions. Political commitments, economic growth, higher tax revenues, and greater democracy can influence a greater share of GDP going to health financing. However, simply spending more on health does not guarantee improved health outcomes. Strengthening financial resilience of the health sector requires firm policy to reform domestic spending. Institutional financing frameworks should pursue services tailored to specific populations, while maintaining balanced budgets and long term sustainability.

Second, countries need to emphasize efficient allocation of health services to underserved populations. Government policies should target the informal sector and near poor (e.g. $2-8/day income) who are excluded from poverty programs but experience financial hardship to access health. Without deliberate attention to prioritize investment in rural areas and urban slums, additional resources would be captured by established service providers in urban areas. Investing in health can reduce inequalities if fiscal policies are strategically designed to limit potentially negative impact on economic growth.

Third, a large for-profit and non-for-profit sector in Africa is growing largely unregulated, fragmented and excluded from national health policies. The private health sector represents investment opportunities of between $11-20 billion over the next 10 years. A regulatory environment with the right incentives is required to encourage private sector financing to grow and contribute positively to public health.

This presentation is intended to stimulate debate among policymakers working in Africa and developing a comprehensive vision of health care systems in line with achieving the SDGs.
Claire Cole, Pathfinder International, United States
Abstract ID: 1795

**Whose strength?: System strengthening lessons from applying the Consolidated Framework for Implementation Research to maternal health positive deviance cases in Nampula Province, Mozambique**

Co-authors: Claire B. Cole, Julio Pacca, Alicia Mehl, Luc Van der Veken, Pathfinder International

Pathfinder’s USAID-funded Strengthening Communities through Integrated Programming (SCIP) project (2009-2015) builds the strength of communities and health systems in Nampula province, Mozambique to address priority needs including maternal health (MH). In 2011, we adopted a positive deviance approach to identify two facilities with significant increases in institutional deliveries to near 100% coverage. We followed a sequential mixed methods approach: 1) Analysis of clinic register data to assess performance consistency over time; 2) Adaptation of the Delphi method convening two expert panels representing all health system levels to assess events during the observation period, relevant actors involved, and other potential factors relevant to the cases; 3) Semi-structured interviews with MH nurses, facility managers, Traditional Birth Attendants (TBAs), Community Leadership Council (CLC) members, and beneficiaries using snowball and saturation. Coding of 32 transcripts used the Consolidated Framework for Implementation Research (CFIR) to identify relevant contextual factors across cases, adapting CFIR scoring to distinguish between community versus health system actors, as relevant to the intervention’s design.

Findings have important lessons for the project, health systems research, and development. In both cases, observed change in deliveries was associated with three core intervention components: 1) CLC revitalization, 2) community MH discussions, and 3) Nurse and TBA collaboration and mentorship. Despite nearly identical interventions, contextual factors relevant to the two cases diverged importantly. In Facility A, contextual factors aligned between health system and community actors, both citing examples of mutual collaboration and investment in implementation. Alone, this could suggest the integration of the community and health system in implementation was a key success factor. However, the contextual factors in Facility B across stakeholder respondents show notable misalignment, with poor performance and even harm by health system actors toward the intervention goal. Interviews demonstrate that community actors operated as an autonomous system—revitalized and made operational by the intervention— to enable systematic and coordinated progress despite inadequacies in their local health system counterpart. This suggests: 1) HSS interventions may benefit from rethinking of the target for system strengthening—rather than placing primacy on health actors, it may be advantageous (particularly considering complexity at scale) to invest in health and community systems as autonomous, complementary parts of a whole. 2) The CFIR, originally developed for context in formal service delivery organizations, can be applied to assess context for interventions whose implementers span both formal health and informal community systems or “organizations”—key to many development agendas.
David Collins, Management Sciences for Health, United States
Abstract ID: 1516

Calculating the resources needed for the comprehensive community health service package in Sierra Leone using a new costing tool

Co-authors: David Collins, Colin Gilmartin, William Newbrander, Sara W Wilhelmsen, Zina Jarrah, Management Sciences for Health; Harvard University - Chan School of Public Health

Background: Community health services (CHS) are the first-level platform of the health system, providing accessible and affordable preventive, promotive and basic curative health care services to families. They are a critical element of universal health coverage and must be resourced appropriately. However, in many countries, CHS are donor-driven and fragmented and need to be combined into integrated services run by governments. For this to happen there is an urgent need to identify and analyze the current and future cost of the packages.

Until now, CHS costing has mainly focused on single or combined programs (eg, family planning and child survival) and little or no costing has been done of comprehensive CHS packages. To assist countries in conducting such costing, UNICEF has commissioned the development of a costing tool and methodology which has recently been piloted in Sierra Leone, where basic health services have been seriously affected by the recent Ebola outbreak and the government needs the costing to help redevelop them.

Methods: The new CHS costing tool is for countries to use to analyze and project costs and financing, to estimate the cost of removing bottlenecks and to estimate the impact (eg lives saved) of selected interventions. A data collection process was developed, including the collection of service and cost data at national and local levels as well as the use of an expert group meeting to provide guidance on the package and on service delivery norms.

Results: The expert group workshop was held and provided invaluable information on the planned new package of services and its contents. Interviews with the UNICEF country team, MOH staff and donor and NGO representatives provided important information on the current system. Interviews were conducted in two districts with a total of 25 community health workers (CHWs) and 28 supervisors and managers. In addition, numbers of services, CHWs and program costs were all identified and were analyzed. A number of serious bottlenecks were identified including insufficient CHWs, the lack of incentives, and stock-outs of medicines and lack of equipment.

Discussion: The data gathering process was sufficient to gather the required data and the tool proved to be satisfactory for analyzing the data and producing results that were useful and informative for the country. The results of the analysis are currently being provided to the country for validation but will be presented, together with the tool and methodology, at the Symposium.
Manuela Colombini, LSHTM, United Kingdom
Abstract ID: 1275

**Agenda setting and framing of gender-based violence in Nepal: how it became a health issue**

Co-authors: Manuela Colombini, Susannah H Mayhew, Ben Hawkins, Meera Bista, Sunil Kumar Joshi, Berit Schei, Charlotte Watts, LSHTM; Kathmandu Medical College; NTNU

Background: Gender-based violence (GBV) has been addressed as a policy issue in Nepal since the mid 1990s, yet it was only in 2010 that Nepal developed a legal and policy framework to combat GBV. This article draws on the concepts of agenda setting and framing to analyse the historical processes by which GBV became legitimized as a health policy issue in Nepal and explored factors that facilitated and constrained the opening and closing of windows of opportunity. The results presented are based on a document analysis of the policy and regulatory framework around GBV in Nepal.

Methodology: The results presented in this article are based on a document analysis of the policy and regulatory framework around GBV in Nepal (published and/or adopted between 1998 to present). A qualitative content analysis of over 40 policy document was undertaken. The informational content of the data was categorised deductively, using pre-conceived themes elaborated at the beginning of the analysis. These included, among others, the: conceptualisation of GBV as a health issue; enabling policy and regulatory environment around GBV and health; rationale for integration of GBV into health sector; and the rationale for adoption of key health policies around GBV.

Results: Agenda setting for GBV policies in Nepal evolved over many years and was characterized by the interplay of political context factors, actors and multiple frames. The way the issue was depicted at different times and by different actors played a key role in the delay in bringing health onto the policy agenda. Women’s groups and less powerful Ministries developed gender equity and development frames, but it was only when the more powerful human rights frame was promoted by the country’s new Constitution and the Office of the Prime Minister that legislation on GBV was achieved and a domestic violence bill was adopted, followed by a National Plan of Action. This eventually enabled the health frame to converge around the development of implementation policies that incorporated health service responses.

Conclusion: Our explicit incorporation of framing within the Kindgon model has illustrated how important it is for understanding the emergence of policy issues, and the subsequent debates about their resolution. The framing of a policy problem by certain policy actors, affects the development of each of the three policy streams, and may facilitate or constrain their convergence. The concept of framing therefore lends an additional depth of understanding to the Kindgon agenda setting model.
Do people in patients' home countries care about the health equity impacts of medical tourism on health systems abroad? An examination of Canadian stakeholder perspectives

Co-authors: Valorie Crooks, Leon Hoffman, Jeremy Snyder, Ronald Labonte, Simon Fraser University; University of Ottawa

Background: The international medical tourism literature suggests that destination countries can experience both health equity gains and losses resulting directly and indirectly from the development of a local medical tourism sector. For example, it is often reported that medical tourism helps to reverse brain drain and bring in foreign revenue, both of which can have health equity gains for the local population. At the same time, other research suggests that there may be a re-direction of local policy resources and a shifting of health care priorities in order to ramp up a medical tourism sector, both of which can contribute to health equity losses.

Methods: After conducting a large, multi-year study of the observed and potential health equity impacts of medical tourism in Mexico, Guatemala and Barbados we created vignettes highlighting the real health equity impacts that emerged from our findings and shared them in 20 interviews conducted with Canadians we broadly conceive of as stakeholders in the practice of medical tourism. More specifically, interviews were conducted with key informants who have expertise in health law and policy, patient advocacy, health care administration, international patient travel, patient safety, and other sectors that are directly impacted by the outflow of patients abroad as medical tourists.

Results: In this presentation we share the vignettes offered to participants and an analysis their discussions of whether or not the identified health equity impacts are positive or negative in nature (i.e., health system gains or losses). We show how a single vignette can be simultaneously interpreted as having negative and positive health equity impacts and that much of this depends on perspective.

Discussion: The findings of this novel analysis contribute much needed knowledge to the limited empirical research on the health equity impacts of medical tourism in destination countries. The 'muddy' nature of the findings, wherein individual impacts can be read as both positive and negative depending on one's perspective, shows the difficulty associated with assigning responsibility for mitigating the harms to public and private health systems alike associated with this global health services practice.
Abstracts

Diana Cuervo- Díaz, Universidad Nacional de Colombia, Colombia
Abstract ID: 1109

Work Disability Prevention in the Colombian Labour Risk System: Barriers and facilitators according stakeholders perceptions

Co-authors: Diana Cuervo- Díaz, Marisol Moreno- Angarita, Universidad Nacional de Colombia

Objectives The research problem lies within the framework of the Colombian Labour Risks System(workers compensation), where the care model has inefficiency to ensure return to work of people who have suffered accident at work or occupational disease.

In this context the following research questions arise: what are the conceptual, procedural and legal adjustments that should be to the Colombian Labour Risk System, to promote a balanced relationship between the financial compensation and return to work as a form of protection to the worker?

Methods: The methodology used was mixed methods, with a first quantitative phase about National Disability Rating Board statistics of workers who have had been assessed to have an economical compensation (period 2007-2014) and other two qualitatives phases in where from document review is intended to consolidate the state of the current return to work model in acts and legal structure of the Colombia labor risk system; to then contrast the Colombian care model, reconstructed through 33 interviews with different stakeholders: insurers, health providers, workers, union and enterprise managers. And finally giving conceptual, legal and de procedural recomendations to improve the care model, developing equitable and fair solutions

Results: The results will emphasize the qualitative phases. There was a convergence between the stakeholders about the workers received a treat with dignity and respect, however the workers, unions, and employers perceived that the information and care process is not clear and opportune. (Procedural Justice and informational justice barriers). There is a lack of a leader to coordinate in the return to work process, and communication between stakeholders. The dilation in the approval of the cases by the assurance companies is a strong barrier. The majority of the participants interviewed, considered preferred a strong policy to guarantee return to work than a single compensation without a process of reintegration.

Conclusion: The Colombian Labour Risk System has an economical return to work model, based in private assurance conceptions, where there aren’t teamwork of the different ministries: Health, Finances, Work. This study pretends to guide the police makers, in the future reforms. The improvements suggested include a transdiciplinary, multilevel and procedural justice approach.
An exploration of factors that influence health priority setting decisions in Tororo district, Uganda

Co-authors: Okumu David Cyrus, Kapiriri Lydia, Makerere University School of Public Health, Kampala Uganda; Department of Health, Aging and Society, McMaster University, Ontario Canada

Background: Uganda is a decentralised country, with the district level having the mandate for operational planning, meso resource allocation and service delivery. Tororo is a district in eastern Uganda with a population of 534,256 served by a network of 65 health facilities, funded predominantly by the national government. The demand for health services outstrips the available resources. The local decision makers struggle to allocate the limited resources among competing health needs. However, it is not clear what factors influence decisions on which programs to prioritise for funding. Priority setting can contribute to the effectiveness of the available resources in the district and have an impact on access of needed health services. The objective of this study was to explore the factors that influence priority setting in the district.

Methods: We conducted in-depth interviews with 13 key informants (6 local health planners, 2 senior district planners, 4 district technical heads of departments and 1 politician), purposely selected. The interviews lasted between 45 minutes and one hour. We used an interview guide based on the conceptual framework for evaluating priority setting in low income countries developed by Kapiriri et al (2010), whose components comprise critical criteria for successful priority setting. We also reviewed relevant planning documents. Interviews were audio recorded, transcribed and coded. Data analysis was carried out using a thematic approach.

Results and Discussion: Resource allocation decisions are made by politicians in the district supported by technical officers. There is limited stakeholders involvement, hence their understanding and satisfaction of the process is minimal. Critical criteria are not used and the priority setting process is not clear. Resource allocation decisions are mostly influenced by interest of outspoken politicians. Local decision makers lack capacity for systematic identification of health priorities, as a result there is no fairness in the process. Decisions and not reasons are communicated to the community and publicity is occasionally made through radios and meetings.

Conclusions: There is limited stakeholders involvement and no clear criteria for setting health priorities in Tororo district. The process lacks fairness. To improve, the district should widen stakeholders’ participation and adopt relevant criteria to guide their decisions. Capacity of stakeholders involved in priority setting should be built if their decision is to have impact on access of needed health services by the community. The conceptual framework was found to be useful in evaluating priority setting at district level in a low income country.
Disparities in access to first trimester legal abortion in the public sector in Mexico City: Who presents past the gestational age limit?

Co-authors: Biani Saavedra-Avendano, Patricio Sanhueza-Smith, Raffaela Schiavan, Blair G. Darney, National Institute of Public Health; Ministry of Health-Mexico City; International Pregnancy Advisory Service- Mexico

Background: Abortion was decriminalized in Mexico City in 2007, and first trimester (<12 weeks’ gestation) abortion services integrated into the public health services system as the Interupcion Legal de Emabrazo (ILE) program. Abortion services are free or sliding scale; cost should not be a barrier. However, women who present for care past 12 weeks are not able to receive services, and abortion remains highly restricted in the 31 states outside of Mexico City. The objective of this study was to identify factors associated with presenting for abortion services past the gestational limit.

Methods: We conducted a retrospective cohort study using clinical data from the ILE program in 2011 and 2012. Our primary outcome was receipt abortion services (versus not due to presenting past the gestational age limit). We compared characteristics of women who did not receive abortion services with those who received either medication or aspiration abortion. We used multivariable logistic regression to identify associations between client characteristics and our primary outcome, controlling for confounders.

Results: Our sample included 22,945 women, 8.6% of whom (n=1935) did not receive abortion services due to presenting past the gestational age limit, 73.1% had a medication, and 18.3% an aspiration abortion. Adolescents (&lt;18 years old) made up 14.2% of the sample and 32.7% were from outside Mexico City. Women who did not receive services were significantly younger, had less education, and fewer previous pregnancies. The majority (89%) of those who did not receive services presented between 12-16 weeks. In the multivariable model, women who traveled from the nearby State of Mexico (aOR=0.89; 95% CI=0.79–0.98) or from another state (aOR=0.83; 95% CI=0.67-0.99) both had lower odds of receiving services, compared with women living in Mexico City. Adolescents had lower odds of receiving services compared with adults (aOR=0.67; 95% CI=0.58–0.77). Women with basic educational levels (aOR=0.71 and 0.72 for primary and secondary versus high school or higher), unemployed (OR=0.75; 95% CI=0.66-0.84), or who had not experienced a previous pregnancy (aOR=0.79; 95% CI=0.69-0.90) had lower odds of receiving services.

Conclusions: The Mexico City ILE public abortion program is an important health system achievement to advance the health and rights of women in Mexico. However, disparities persist in access to services. Public health system efforts should promote earlier recognition of pregnancy and timely assistance to access services in Mexico City for women from other states, younger and nulliparous women, and those with low education levels.
Women health extension workers: core players using e health to strengthen equitable health systems by responding to community health needs in Southern Ethiopia

Co-authors: Daniel Gemaechu Datiko, Hayley Teshome Tesfaye, Jarso Tulu Mekonnen, Aschenaki Zerihun Kea, John Dusabe, Sally Theobald, REACH ETHIOPIA; Liverpool School of Tropical Medicine

Background: Ethiopia established a Health Extension Program (HEP) in 2004, which includes the training and deployment of female health extension workers (HEWs) based at local level to improve community access to primary health care services. There is a growing body of global evidence that m-Health can improve health systems responsiveness and resilience through enhancing access to and delivery of health services. The Ethiopian government has recently launched an eHealth strategy providing a framework to support the HEP. The aim of this study was to assess the capacities, opportunities and challenges to using eHealth to strengthen equitable health systems in Southern Ethiopia and inform the development of a subsequent e-health intervention.

Methods: This mixed method baseline study was conducted in two zones of southern Ethiopia to assess the feasibility of using eHealth in response to major public health problems and inform the implementation of an eHealth project. Methods included quantitative questionnaires (n=57) and purposively sampled qualitative face-to-face semi-structured interviews (n=10) and focus group discussions (FGD) (n=4). The participants of the study were female HEWs, focal persons for TB, maternal health and health management information system (HMIS) from district to regional level.

Results: Themes were identified relating to female HEW commitment and role, supervision and performance management. The HMIS was seen as important by all participants, but with challenges of information quality, accuracy, reliability and timeliness. Participants’ perceptions varied by group regarding the purpose and benefits of HMIS and also the potential of an eHealth system. Mobile phones were used regularly by all participants, although the extent to which this responded to health needs of the community and improve patient care is limited. Challenges related to mobile phone coverage, ability to charge phones and payment for airtime

Discussion: E-Health technology presents a new opportunity for the Ethiopian health system to improve data quality and community health by providing real time data for decision making. Empowering, supporting and responding to the challenges faced by frontline female HEWs who will use the technology and are a critical bridge between communities and health systems will be important part of ensuring the sustainability and responsiveness of eHealth strategies. Pragmatic design and implementation of eHealth technology should be built on the existing HMIS and based on the available knowledge and skill, challenges and potential of the technology. Appropriate training, supportive supervision and performance management should be in place to ensure its successful implementation.
Nikki Davis, JSI Inc, United States  
Abstract ID: 2276

Supervision of community health nurses in Ghana: Experiences and expectations for improved performance

Co-authors: Soumya Alva, Emma Sacks, Sophia Magalona, Linda Vesel, JSI Inc; ICF International; JSI Inc.; Concern Worldwide (US)

Background: Adequate supervision is critical to maintain motivation and performance of frontline health workers, a key contributor to the provision of quality care at the community level. Yet supervisory relationships are complex, supervision and mentoring are often limited, and if available, often of poor quality. This paper examines the supervision structure, extent and nature of supervision available to community health nurses (CHNs) in Ghana and how it relates to their level of motivation and satisfaction in performing their roles.

Methods: We present results from a baseline mixed method study of CHNs in 2014 in five districts in the Greater Accra and Volta regions in Ghana including 205 surveys administered to all CHNs available, and 40 qualitative interviews, 29 with CHNs and 11 with supervisors. These data were analyzed in Stata and NVivo to explore the domains of supervision including the frequency of interaction between CHNs and their different supervisors, the nature of mentoring and assistance received, and type of supervisory assistance desired.

Results: On average, 64% of the CHNs reported receiving assistance from any of their supervisors in the preceding year, with variations in type and frequency of assistance. Feedback from supervisors was mainly related to meeting clinical targets (47%) or about how to handle specific cases/patients (20%), but not about their professional development or mentorship needs. When asked about their mentorship needs, CHNs reported the desire to receive feedback on areas needing improvement (40%), and to receive encouragement when they did things well (30%). Supervisors, in turn, reported a cordial relationship with CHNs. However, with little face-to-face interaction on a regular basis, both groups report the need for supportive supervision on a regular basis.

Discussion: Supervision and mentoring are key for CHNs who often work in communities in difficult and isolated areas. Studies have shown that quality supervision positively influences job motivation, retention, and satisfaction among community health workers. CHNs in Ghana receive an adequate number of supervisory visits, yet the accountability structure is confusing. Most visits are very limited in scope and restricted to performance monitoring and achieving clinical targets do not extend to mentoring. Findings from this baseline study contributed to adding a supervision module to a mobile health application “CHN on the Go”, the key intervention of the Care Community Hub project in Ghana under the “Innovations for Maternal, Newborn and Child Health Initiative” to improve CHN motivation in the project areas in Ghana.
Colleen Davison, Queen's University, Canada  
Abstract ID: 2788  

**Engaging Youth in Child-Focused Human Centred Design: A new spin on participatory research and integrated knowledge translation for health problem solving with young people.**  

Co-authors: Colleen M Davison, Valerie Michealson, Queen's University  

**Purpose:** Human-Centred Design (HCD) is an approach to research and problem solving that actively seeks human perspective at each stage of the problem-solving process whether that is observing the problem, brainstorming possible solutions, conceptualizing a chosen action, developing a plan of action or implementing the solution. It emphasizes dignity, access, and cultural appropriateness. In child-health research, although the UN Convention on the Rights of the Child states that when children are the focus of research, they have the right to be consulted, this is not always standard practice among child health researchers and development professionals doing monitoring and evaluation. The purpose of this poster will be to highlight the concept of child-focused HCD, providing positive examples including from our work at the Queen’s University Child Health 2.0 initiative (www.childhealth2.com), and to emphasize the opportunities of this approach for global child health work more broadly.  

**Focus:** Child-focused HCD is specific to child and adolescent health issues and aims to actively and very intentionally engage youth in problem solving. It recognizes that children and adolescents have a unique, and non-adult, perspective that – although not necessarily more or less valued than an adult perspective- should be specifically sought. This is particularly true because Human Centred Design principles emphasize that in order for solutions to be effective, the population of focus should be involved in the problem solving at all stages. HCD has many similarities with participatory action research and integrated knowledge translation, but focuses more specifically on solutions. In a global health context, child-focused HCD has been used to inform interventions for reduction of sexually transmitted infections, gender-based violence, injuries and substance abuse as well as to increase use of health care services by young people. Yet, it is still relatively unknown as a mainstream approach.  

**Significance for the sub-theme area:** Children and adolescents represent important collaborators in health system research and development work that involves them. In many contexts, this is a new idea. Child-focus HCD provides a structure through which meaningful engagement of young people in problem solving for child health can occur.  

**Relevance and Target Audience:** The audience for this poster will be researchers and practitioners interested in effectively addressing global child health issues and those hoping to learn about this innovative, practical and structured way to engage youth.
Maëlle de Seze, The University of Sheffield, United Kingdom
Abstract ID: 3021

Harnessing political support for an emerging global health priority: the case of hepatitis and the challenges it brings to health systems in West Africa

Co-authors: Maëlle Marie Laurence de Seze, Julie Balen, Simon Rushton, Olivier Nay, The University of Sheffield; Université Paris 1 Panthéon-Sorbonne

Background: According to the World Health Organization (WHO), the viral hepatitis pandemic is responsible for 1.4 million deaths every year, mostly in Asia and West Africa. Since 2010, WHO and other actors have increased attention given to the hepatitis issue, after decades of invisibility. This led to the development of the first global health sector strategy for viral hepatitis 2016-2021. How and why has hepatitis become a global health priority, and how has this affected the development of hepatitis responses at national and sub-national levels in two selected West African case study settings, namely Senegal and The Gambia?

Methods: We use Jeremy Shiffman’s framework to analyse determinants of political priority for hepatitis (Shiffman and Smith 2007) in two case study settings, Senegal and The Gambia, to study the impacts of global health priority setting on national health systems in West Africa. We explore 11 factors through process tracing, using in-depth semi-structured interviews with key informants active in the global mobilisation against hepatitis, including patients, activists, policy-makers, researchers and doctors, in addition to archival research and grey literature study.

Results: Results indicate that key factors explaining the recent political support for hepatitis are the emergence of two guiding institutions, the policy window, the recognition of strong leaders and the characteristics of the issue. Conversely, limiting factors for the mobilization are the cohesion of the network concerned with the issue, the framing of the issue and the lack of affordable solutions to care for chronic carriers in West Africa. An important addition to Shiffman’s framework found in this study is the crucial role of scientists and health research programs in highlighting a particular issue and finding effective solutions. Health researchers appear to be major actors of health system strengthening in low- and middle-income countries.

Discussion/conclusions: There is a general notion in Global Health that priority setting is a result of burden of illness, but scholars in political science have shown that the determinants of agenda-setting and the rise of a particular issue as a public priority is not based on an objective reality but on a multitude of factors such as civil society mobilisation, visibility in the media, political support from key actors, etc. Understanding those factors allows for more efficient social mobilisation and inter-sectoral action. In the case of hepatitis in West Africa, taking limiting factors into account will be essential for the global mobilisation to turn into effective action.
Daniel de Vries, University of Amsterdam, Netherlands
Abstract ID: 2217

The Self-Organizing, Low-Input Health Intervention: Some Lessons Learned from the Developing Sustainable Community Health Resources in Poor Settings in Uganda (CoHeRe) project

Co-authors: Daniel H. de Vries, Denis Muhangi, Laban K. Musinguzi, Turinawe E. Benoni, Jude T. Rwemisisi, Robert Pool, University of Amsterdam; Makerere University

Background: Externally driven health interventions common to health service models may be inherently unsustainable due to a lack of community ownership, paternalistic or culturally inappropriate assumptions, or confidence gaps between biomedical models and indigenous health practices. Since 2011, the CoHeRe project has been mixing ethnographic research with a pilot intervention in rural Uganda to document how linkages to formal health systems and health outcomes could be motivated by minimal inputs capitalizing on existing community health resources. This paper summarizes results and some lessons learned.

Methods: Three Ugandan doctoral anthropology students spent regular time in a relatively poor, rural trading centre in Luwero County between 2012 and 2014. Ethnographic methods included participant observation, focus groups and formal interviews. Mid-way through their fieldwork students were assisted by a Makerere University postdoctoral researcher to discuss with community members and local health clinic what health-related improvements could be done by villagers. Team members never provided or promised any external, financial compensation. Results of the intervention were captured through ethnography, complemented by baseline, midline and endline surveys.

Results: Five community-driven interventions developed: 1) community construction of a public latrine, 2) community saving groups focusing on domestic sanitation and hygiene, 3) voucher referral program providing health clinic access, 4) bicycle race with health outreach for men, 5) simple sticker campaign to stimulate handwashing. Results show improvements in community knowledge about health and health behavior, and a shift towards seeking care at government clinics. Notable, these low-input interventions raised a sense of consciousness about health and a desire to make local improvements. Community leaders became more self-driven to mobilize community to make health improvements that they previously did not seem to care about. Residents expressed a heightened feeling that the community was able to do things on its own, using their own contributions.

Conclusion: Overall, our results show that 1) extremely poor communities can still leverage social and economic resources to improve their health, and 2) these improvements were driven by sustained interest and care from outsiders, rather than large financial investments by external programs.
The Ebola outbreak and the Liberian Health System: country-led agenda setting for health systems research through the case study of Neglected Tropical Diseases

Co-authors: Laura Dean, Anthony Bettee, Karsor Kollie, Kate Hawkins, Sally Theobald, Liverpool School of Tropical Medicine; Ministry of Health and Social Welfare, Liberia; Pamoja Communications, UK

Background: During the Ebola outbreak in Liberia, trust between health workers and communities broke-down, and resources were diverted from routine health systems activities to control the outbreak. There was a decline in services available at all levels of the health system, as well as increased vulnerabilities in the social determinants of health for many individuals. To strengthen the future resilience of the health system, health systems research to ensure holistic systematic systems strengthening is required. As the Ministry of Health (MoH) rebuilds the health system, we describe our first step in supporting health systems research in Liberia; country-led research agenda setting from the perspective of all stakeholders.

Methods: We conducted two participatory stakeholder workshops at the different levels of the health system: national and county level. Workshops explored the impact of Ebola on the health system and established key health systems research priorities. The case study of the Neglected Tropical Disease (NTD) programme was used to gain deeper understanding of the impact of health systems collapse on vertical programmes, as well as exploring how vertical programmes can be used in re-building stronger health systems. Meeting participants included community representatives and multi-sectoral stakeholders from education, health and agriculture. Experiences and recommendations were synthesised according to the health systems building blocks.

Results: The impacts of the Ebola outbreak were felt across all of the health system building blocks at the community, county and national level. Priority areas for future research and action include: Capacity strengthening in leadership and governance to ensure evidence based policy development and context appropriate implementation. All cadres of the health workforce need better strategic co-ordination, motivation and retention. Research is needed into the impact on health financing and sustainable intervention delivery of integrated budgeting for vertical disease programmes at the county level. Health management information systems should be developed to allow accessible and accurate monitoring to ensure rapid response to communicable disease outbreak. Research and advocacy is needed to ensure availability of essential medicines, products and technologies. Finally, to ensure effective service delivery it is critical to understand how trust between the health system and communities can be re-established with a focus on context relevant social mobilisation strategies.

Conclusion: Multi-sectoral perspectives allowed for the identification of novel country-led research priorities that cannot be ignored if a stronger more resilient health system is to be established in Liberia that can deliver an equitable response to future health-shocks.
Selina Defor, Ghana Health Service, Ghana
Abstract ID: 2411


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**Background:** The need for locally-driven evidence to guide health policy decisions has been made urgent with the demonstrated health systems vulnerabilities in West Africa. Health Policy and Systems Research (HPSR) has been globally accepted as having the potential to identify health system challenges and orientation. Despite its importance in providing evidence for decision-making, biomedical approaches appeared to dominate the health research landscape. Additionally, research findings hardly get disseminated across health systems even though most countries share similar health systems challenges.

This paper analyzed HPSR publications across the sub-region to: understand the trend of publications in French and English, identify individuals and institutions conducting HPSR and ascertain the level of involvement of West African researchers in HPSR evidence generation. A clear understanding of the prevailing situation will help to develop viable collaborative networks to harness regional resources for the production and promotion of intraregional knowledge sharing to strengthen health systems across the sub-region.

**Methods:** We conducted a literature review from July 2014 to September 2015. Literature searches were conducted in English and French using Google Scholar, PubMed Central, the EBSCO host Database and CAIRN.INFO. Search terms employed included Health Policy Systems Research AND West Africa, Health Systems Research AND West Africa, Health Care Financing AND West African country, Health Service delivery AND West African country, Health Leadership OR Governance AND West African country, Health Information Systems AND West African country, Health Care AND Human resource AND West African country.

**Findings:** A total of 258 peer reviewed articles were retrieved, of which 246 met our inclusion criteria. Although publications led by West African authors represented nearly 50% of the articles, the study showed the bulk of HPSR literature emanated from just a few countries. Nigeria (28, 9%) Burkina Faso (21.5%) and Ghana (17.1%) accounted for two thirds of the publications. While countries like Liberia (0.8%), Guinea Bissau (0.4%) and Togo (0.4%) produced very little. We further observed that while Universities hosted the majority of stakeholders doing HPSR, English has also been the predominant language for publication in the sub-region.

**Conclusion:** Generally, there has been a gradual increase in the number of publication in West Africa since the Ministerial summit on health research in 2004. However the rate of publication varies among member countries. This underscore the need for innovative intraregional South–South collaborations that will help build an inclusive and a sustainable HPSR community in West Africa.
Peter Delobelle, University of the Western Cape, South Africa, South Africa
Abstract ID: 2876

Using systems dynamics to address maternal health system performance in the Eastern Cape, South Africa

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BACKGROUND: Strengthening health systems in contexts of adversity is the aim of the ReBUILD consortium in which innovative research methods are used for generating systematic knowledge related to health systems performance. The aim of this study was to analyze contextual determinants of weak health system performance related to maternal health service delivery in OR Tambo District in the Eastern Cape, South Africa. Systems dynamics offers a method of exploring the determinants of health systems vulnerability and lends itself to participatory consultation with stakeholders. Identifying sources of vulnerability and health systems structures and designs that promote resilient functioning can inform policy-making across a broad range of settings.

METHOD: The study used a structured approach, including a scoping phase focused on problem analysis and interviews with key informants (n = 20) to identify core variables underlying the problem. The variables were refined through a process of iterative enquiry and a preliminary seed model developed by the study team. This was used to inform a group model building exercise with a group of stakeholders working in maternal health services to identify collective mental models and identify the interrelationship of these variables. Causal loop diagrams were developed to illustrate the potential impact of alternative scenarios on health system performance, which were subsequently shared in a workshop with a broader group of stakeholders in the District.

RESULTS: Group model building identified key drivers and outcomes of maternal health systems delivery, including the quality of care, impact of structural changes, accountability, resource availability, effectiveness of the referral system, staff attitudes, commitment and motivation, staff support, competencies and training, impact of NGO support, drug supply, data use for management, leadership and team building. Causal loop diagrams pointed to key leverage points with an impact on maternal health systems delivery in the District, focusing on leadership and team building, in turn enhancing staff support and motivation, confidence, ownership and quality of care.

CONCLUSION: Systems dynamics modelling provided a useful tool to identify determinants of health systems performance in this study, pointing to the need to focus on leadership and team building to improve maternal health outcomes. Group model building proved to be useful as participatory method to engage stakeholders in addressing issues underlying health systems performance, providing an opportunity for reflection among health care providers and opening up spaces to address issues of weak health systems performance.
Feasibility of using participatory processes for sustainable and replicable project interventions: lessons from Missed Opportunities for Maternal and Infant Health project in Ntchisi district, Malawi

Co-authors: Zione Dembo, Charles Makwenda, Bejoy Nambiar, Nehla Djellouli, Els Duysburgh, Parent and Child Health Initiative (PACHI); University College London; Ghent University

Background: In Malawi, improving postpartum care (PPC) has been neglected as a strategy for improving maternal and newborn health (MNH) outcomes. The Missed Opportunities for Maternal and Infant Health (MOMI) project assessed how implementation of tailored health system strengthening interventions in the postpartum period resulted in improved MNH services and the feasibility of using participatory processes to ensure that PPC interventions are implemented in an appropriate, sustainable, effective and replicable manner.

Methods: Four qualitative case studies were conducted in four health facilities and their surrounding communities in Ntchisi district. Data was collected from purposively sampled participants. 12 semi-structured interviews were conducted with postpartum women, 8 with community health workers, 12 with healthcare workers, six with policymakers. Additionally, we conducted structured field observations. Analysis was performed using a realist evaluation approach to test and refine programme theories.

Results and discussion: The results indicated that the strategic use of policy advisory board members and community engagement was useful in increasing awareness of postpartum care and also helped PPC to be prioritized within MNH services. Community groups were involved in data collection on MNH which were used in understanding communities’ postpartum problems, developing and implementing solutions and evaluating the impact. Community volunteers conducted postpartum home visits to check mother and infant, provide health education and refer to the health facility appropriately.

Community involvement strengthened the link between community PPC and health facilities through home visits and information sharing in community group meetings. The design of MOMI interventions was responsive and context specific as the interventions were based on needs identified during a situational analysis with policymakers and key stakeholders hence making interventions more acceptable. Embedding implementation in the existing health structure is feasible and sustainable. Nevertheless some challenges were experienced including team leaders having several competing responsibilities which resulted in implementation delays. Additionally, the short implementation time and lack of clear monitoring mechanism during implementation could not allow effective monitoring and evaluation of the impact of interventions on MNH outcomes.

Conclusions: For sustainability and replication of interventions to improve postpartum care there is a need for strong involvement of the district health teams and the community, whilst interventions should be simple, easy to implement and aligned with existing health structures. However, project staff has a
key role in facilitating the functionality of the health structures by empowering teams to implement activities independently while directing and monitoring the implementation to achieve intended outcomes.
Health systems strengthening play an important role: lessons learned from a Mass Antimalarial Drug Administration project in Comoros

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Background: Since 2007, an anti-malaria project supported by the Chinese government has been implemented in Comoros, an island country in the India Ocean. The project controlled the malaria epidemic through the mass drug administration (MDA) of an Artemisin-based Combination Therapy (ACT) drug. After the completion of the MDA in 2013, Comoros experienced dramatic decreasing of malaria prevalence and incidence, thus shifted its strategy to moving towards a malaria-free country. The study aimed to explore the successful experience and lessons learned from the MDA project.

Methods: a qualitative approach was used through in-depth interviews with policy makers, international organizations, donor agencies, health workers and community members during in-country visit in August 2015. In total, 81 individuals from 16 villages within 13 districts of all three islands were interviewed in order to reach information saturation.

Results: After its immediate major reduction, malaria prevalence and incidence still remain low in Comoros. The results could be attributed to project-specific implementation methods in regards to carrying out MDA strategy, and the post-project health system strengthening measures. Firstly, the project garnered support from high-level policy makers down to community leaders, which assisted greatly in efforts to generate acceptance among the general population. Secondly, a Chinese implementing team worked directly onsite with the locals, which streamline the collaboration and communication between local government and the donor agency. Thirdly, health outreach and project promotion were implied prior to the MDA, which led to a successful enhance in community engagements. More importantly, the project involved some basic health systems strengthening measures including the build-up of village microscopic stations, the training of malaria lab technicians, Village Malaria Volunteers (VMVs), and the establishment of a disease reporting and surveillance system, which greatly ensure the success and sustainability of the project.

Conclusion: as the first Chinese health development aid project that replaced top-down development pathways with a grassroots approach, the Comorian project showed that such approach was able to achieve more thorough and sustainable results. Furthermore, MDA has been used as a key strategy to control different diseases. It should also be noted various factors were integrated in order to produce significant results of the MDA project, among all factors that tied to strengthening the health system in recipient countries.
SUREKHA DHALETA, Centre for Health and Social Justice, India
Abstract ID: 2548

**Bridging divides for better health care: Building Community Leaders Capacities in Innovative Use of ICTs to Facilitate Communication between Health Systems and communities enhancing responsiveness**

Co-authors: SUREKHA DHALETA, Centre for Health and Social Justice

Purpose: Communication gap between communities and health service providers as well as decision makers often results in non-availability of timely and adequate care. ICTs have been proposed to bridge the divide to facilitate quicker and efficient communication for meeting the community health needs and for prioritizing in health planning. This paper presents the outcomes of building capacity of community leaders in using accessible technology for monitoring availability of health services and to effectively communicate with health service providers for prioritizing community needs and provide support in addressing the challenges in accessing health care.

Content: Six groups, each one consisting of six-seven community level leaders in six states of India, who have also been involved in community monitoring of health services were selected for capacity building on use of easily available technology. They were already using technology such as cell phones and basic cameras. They were given technical training in three rounds on producing digital evidence, presentation, multiple ways of use of data on maternal health, nutrition, functioning of health centres and denial of health rights of manual scavengers. Subsequently, community leaders discussed the use of accessible technology within their community and with community members collectively chose a theme and used technology to generate evidence. Photo documented evidences, on gaps and situation in the health systems were collated, reviewed and shortlisted in collaboration with community members and were used for interface with concerned health officials and committees related to grievance redresses through public health dialogues at different levels of health systems. The entire process starting with capacity building was carried on for a period of one year with multiple rounds of interactions between health care providers and communities. It drew attention of authorities prompting them to problem solving action and use of accessible technology elicited keen interest of community, better engagement of providers, timely emergency care, feedback was taken for better planning.

Significance: Empowering communities to use accessible and affordable technologies for effective communication on the health services, community needs and for planning has potential to effectively engage decision makers to respond to the community health emergencies and needs, bridge communication gaps and increase mutual trust and promote critical dialogue with health service providers. The sustained use has shown results in strengthening the responsiveness of the health providers to communities.
Vishal Diwan, Liverpool School of Tropical Medicine, United Kingdom
Abstract ID: 2632

**Negotiating gendered hierarchies and power relations: a qualitative study of ASHAs’ perceptions and experiences of their role in promoting maternal health in Madhya Pradesh, India.**

Co-authors: Rachel Tolhurst, Minakshi Bhardwaj, Kate Jehan, Vishal Diwan, Liverpool School of Tropical Medicine; University of Liverpool; RD Gardi Medical College

**Background:** The Accredited Social Health Activist (ASHA) programme in India is one of the largest Community Health Worker (CHW) programmes in the world, with around 900,000 women currently serving in this position. Created in 2005, their stated role in policy is to act as agents of change with regard to maternal health and to facilitate women to access available health services. As such they constitute an interface between communities and health services. ASHAs are women who are resident in the communities they serve and undergo a series of training modules. The ‘social embeddedness’ of CHWs has been recognised internationally as both an opportunity and a barrier to their performance. However, little is known about how CHWs negotiate power relations in enacting their roles within their specific contexts.

**Methodology:** This study involved 13 qualitative, semi-structured interviews and 5 focus groups with ASHAs in rural areas of two districts in Madhya Pradesh state. These explored the opportunities and challenges in operationalizing their role with relation to maternal health, and their strategies to meet the challenges. The data was analysed using thematic framework analysis.

**Results:** ASHAs interpreted their tasks as facilitating access to hospitals for institutional delivery, organising and promoting preventative services, and providing health advice. As such, they play a ‘bridging’ role between communities and health services, both physically and in terms of health models and concepts. ASHAs have multiple social positionalities within gender, caste, socio-economic, religious and professional hierarchies. They work within a task-based, authoritative model of health promotion, which is underpinned by performance targets and monetary incentives, and a highly hierarchical, paternalistic health system. In this context they are both enabled and constrained by their own social positionalities in fulfilling their roles, and face personal and professional vulnerabilities. Their strategies to meet the many challenges in their ‘bridging’ role often involve mobilising authority by leveraging their personal and professional relationships; this may undermine their envisaged role in facilitating equitable community action and social change. However, the ASHA role itself may contribute towards social and health system change, as individual ASHAs work to build trusting relationships, and a social identity which they use to challenge social and professional norms.

**Conclusions:** This study highlights the importance of understanding the ASHA programme as an ‘intervention’ within a social system and of explicitly considering power relations in efforts to assess and improve the effectiveness of CHWs in promoting women’s health and rights.
Vishal Diwan, R D Gardi Medical College, India
Abstract ID: 1614

The public private ‘Janani Sahayogi Yojana partnership’ to provide intrapartum care: perspectives of private obstetricians on what didn’t work

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Background: Private-public partnerships are advocated by India’s national health policy as a means to achieving universal health coverage. In Madhya Pradesh state, the government invited private obstetric hospitals to enter into partnership to provide intrapartum care to poor women, which would be paid for by the state. This statewide program was called the Janani Sahayogi Yojana (JShY) and ran from 2006 to 2012. The partnership was an uneasy one with many private obstetricians choosing to leave the partnership. We conducted a qualitative exploration among private obstetricians who participated in the JShY to understand the dynamics of this public private partnership for intrapartum care.

Methodology: We conducted 15 individual semi-structured interviews with private obstetricians and hospital administrators from 8 districts of Madhya Pradesh who had participated in the Janani Sahayogi Yojana (JShY) Qualitative framework analysis was used to analyze the data.

Results: Respondents joined the partnership both from a sense of altruism and advantage for themselves. Private obstetricians perceived that although their facilities provided better quality of care than state facilities, participation was perceived as risky because beneficiaries were often unbooked and anemic and seen as ‘high risk’ cases. Cumbersome paper work and delays in receiving payments from the state also dissuaded participation. Some respondents felt that there was inadequate engagement by the state in the partnership, they said better monitoring and supervision would have helped, as they had poor responses to discussing day-to-day problems that they faced. The state changed the financial reimbursement arrangements under the partnership because of a very high proportion of cesarean births in the early years of the partnership. Private obstetricians felt that this was unfair, as the sicker women they saw under the partnership required cesareans, However the state believed this was in response to skewed financial incentives. This resulted in a large efflux of private obstetricians from the partnership and the ultimate closing of the partnership.

Conclusion: This study highlights the contribution of cumbersome processes, trust deficits and a lack of dialogue, between public and private partners that resulted in the closing of the partnership. It highlights the need for better preparation and oversight by the state.
Fiona Doolan-Noble, University of Otago, New Zealand

Abstract ID: 863

**Using a modified Delphi technique to develop gold standards for system level measures: A New Zealand experience.**

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**Background:** Counties Manukau Health (CMH) in New Zealand strives to be “as good as or better than comparable health systems anywhere in the world”. To this end CMH has implemented a suite of 16 System Level Measures (SLMs). To assist in achieving its goal CMH wanted to know what national and international experts would consider ‘breakthrough performance’ for each measure, thereby assisting it to recognise when it was providing a health service of excellence to the population it serves.

**Methods:** A two phased modified Delphi process was used to established what would equate to breakthrough performance for each measure. The first round was a traditional indirect, anonymous process, with national and international key informants completing a survey. Responses were gathered by e-mail. The second phase was a facilitated face to face meeting, of a convenience sample of national and international key informants at an Australasian health services conference. In both cases key informants comprised clinicians, health service managers and health service researchers.

**Results:** Eleven of 24 (46%) invited participants took part in round one and 14 of 18 (78%) invited participants, contributed to round two. Consensus regarding what would equate to ‘breakthrough performance’ was reached for all SLMs.

**Discussion and conclusion:** Using a modified Delphi technique proved a suitable strategy for determining ‘breakthrough performance’ for the suite of SLMs developed by CMH. More importantly it generated significant dialogue regarding SLMs, their purpose and what is ‘breakthrough performance’.

Several challenges emerged along the way, including selecting the experts; garnering responses to the electronically mailed out survey; electing to let go of anonymity of participants for the face to face meeting, determining what consensus was and finally the learning as you go scenario.

Despite these challenges there is no doubt that using a modified Delphi technique proved a useful method for achieving consensus on metrics where none existed before. By being open to critique from external independent experts CMH now not only has a framework by which to monitor the performance of their health system, they also have the gold standard for each measure, achievement of which will signify ‘breakthrough performance’ by their system. Together these two elements will support development and responsiveness of the CMH system.
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Abstract ID: 3013

Implementation of universal health coverage policies in West-Africa: Eliciting the policy-makers program-theory of the free cesarean section policy in Benin

Co-authors: Bruno Marchal, Jean-Paul Dossou, Vincent De Brouwere, Institute of Tropical Medicine, Antwerp, Belgium

Western Africa has the highest maternal mortality ratio in the word with 675 maternal deaths per 100,000 live births. Although cost-effective strategies exist and have been introduced throughout the region in an effort to reduce this burden, their micro-implementation usually failed and the timely and equitable access to quality services is insufficient. Little is known about what explains these failures, for whom and in which circumstances. Our case study was the free cesarean section (CS) policy of 2008, which was implemented with mixed implementation outcome in 44 public and private hospitals nationwide in Benin. The study aim was to make explicit what about this policy, was expected to make it implemented as planned.

This is a qualitative exploratory study, using the top-down policy passages theory of Berman (1978) as a conceptual framework. We adopted the policy-scientific approach to reconstruct the implementation program theory. We conducted in-depth interviews with 25 policy-makers purposively selected, and reviewed policy documents until saturation. The transcripts and memos were managed using NVIVO 10. Field and desk retroductive analyses were conducted following an adaptive, iterative and cumulative process.

Local health managers were expected to adopt the policy following compliance and persuasion. The top-down administrative authority and the bottom-up pressure from users were the main enforcement factors expected to trigger compliance. The inclusive and evidence based policy-making process, the equal distribution of resources between facilities, the timely provision of all the required resources and the frequent feedback meetings were expected to promote mutual trust, goals alignment, and social exchanges that would trigger persuasion.

Providing sufficient resources to facilities (150 € per CS, consumables and materials), was expected to lead to the provision of necessary resources for CS to health workers, who would provide a timely CS to all women actually in need, without additional charge. Thus policy-makers were expecting variations in the implementation outcome, based on fees facilities used to charge before: in cases where this fee was less than 150 €, a full removal was expected; in the other case, users would pay the balance.

A set of implicit hypothesis supports the design of the implementation of the free CS policy in Benin. Making this explicit provides room for empirical testing and refinement, to strengthen the adaptive and implementation capacities of the whole health system. In similar contexts, the refined theory and this process may have great benefits for the micro-implementation of all the UHC policies.
Raquel Drovetta, CONICET-Universidad Nacional de Villa María, Argentina  
Abstract ID: 2511

**Safe abortion information hotlines: An effective strategy for increasing women’s access to safe abortions in Latin America**

Co-authors: Raquel Irene Drovetta, CONICET-Universidad Nacional de Villa María

Abstract: This paper describes the implementation of five Safe Abortion Information Hotlines (SAIH), a strategy developed by feminist collectives in a growing number of countries where abortion is legally restricted and unsafe. These hotlines have a range of goals and take different forms, but they all offer information by telephone to women about how to terminate a pregnancy using misoprostol. The paper is based on a qualitative study carried out in 2012-2014 of the structure, goals and experiences of hotlines in five Latin American countries: Argentina, Chile, Ecuador, Peru and Venezuela. The methodology included participatory observation of activities of the SAIH, and in-depth interviews with feminist activists who offer these services and with 14 women who used information provided by these hotlines to induce their own abortions. The findings are also based on a review of materials obtained from the five hotline collectives involved: documents and reports, social media posts, and details of public demonstrations and statements.

These hotlines have had a positive impact on access to safe abortions for women whom they help. Providing these services requires knowledge and information skills, but little infrastructure. They have the potential to reduce the risk to women’s health and lives of unsafe abortion, and should be promoted as part of public health policy, not only in Latin America but also other countries. Additionally, they promote women’s autonomy and right to decide whether to continue or terminate a pregnancy.
Diane Duclos, London School of Hygiene and Tropical Medicine, United Kingdom  
Abstract ID: 1273

Looking at the Implementation of a Public Private Partnership in the Senegalese Health System: An Ethnographic Insight

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Background: Supply Chains are attracting increasing attention in health system research and development, leading to innovative partnerships. We are evaluating a Family Planning (FP) supply chain model in Senegal using Private Operators (PO) to improve the availability of FP commodities at service delivery points. This intervention is an example of a Public Private Partnership (PPP). PPPs are often defined from above, looking at mixed financing systems or at the complex landscape of stakeholders involved at national and global levels. In this paper, we look at a PPP at lower levels of the health system, exploring the profiles, discourses and practices of the public and private actors involved in the implementation of the intervention. Our main objective is to provide insight on the implementation of a PPP and ask: how does a PPP translate into practices at the interface between public and private sectors?

Methods: Ethnographic work was carried out to understand the logics and practices of implementation of a PPP in the context of the Senegalese health system. We used 1) observations with PO while performing deliveries and carrying out stock inventories; 2) transcripts of interviews with relevant informants from the private and public sectors. Data were translated and independently coded by researchers in London and Senegal using NVivo. Coding was undertaken along key themes. Analyses also allowed for unexpected issues that emerged to be jointly discussed by the qualitative team to come to a consensus on major findings.

Results: Our data shows that a range of activities were undertaken by the NGO implementing the intervention to facilitate the work of PO inside the Senegalese health system. At regional level, pharmacists employed by the implementing NGO act as facilitators between the regional warehouse and PO. The regional supply programmes are reassured by the presence of the IH pharmacist when handing over FP products to the PO. At regional and district levels, inputs include facilitating integrated supervision and collection of FP monies owed by facilities.

Discussion: Interactions between public and private actors can be interpreted as a hybridisation process redefining public-private partnerships in health interventions. In the original design of the intervention, PO were considered to be neutral ‘outsiders’. However, our findings show that PO are social agents who translate the intervention in local settings. The translations and activities required to make this partnership possible and effective need to be taken into account when designing PPPs.
Stephen Duku, Noguchi Memorial Institute for Medical Research, University of Ghana, Ghana
Abstract ID: 70

Perception of healthcare quality in Ghana: does health insurance status matter?

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Background: Some Sub-Saharan African countries such as South Africa, Gabon, Mali, Senegal, Uganda, Tanzania, Nigeria and Ghana have taken steps towards universal coverage by adopting prepayment and risk pooling systems to provide financial protection particularly to the poor and vulnerable in society. However, enrolment in these health insurance schemes remain low even though premiums are highly subsidized. In Ghana, as at December 2012, active membership of the National Health Insurance Scheme was 35% of the Ghanaian population. Why then are people seemingly irrational by refusing to enroll in these insurance schemes even though premiums are low? The barriers to low enrolment have been suggested to include poor quality of healthcare among others.

Objective: This paper provides an alternative explanation to the low demand for health insurance in Ghana by analyzing the differences in perceptions of non-technical quality of healthcare between the insured and uninsured. It further explores the association between insurance status and perception of healthcare quality to ascertain whether the insurance status matter in the perception of healthcare quality.

Methods: A household survey data of 4,214 adults aged 18 years and above was used for the analysis. Two-sample independent t-tests were used to compare the average perception of quality per health facility between the insured and uninsured. Ordinary Least Square regression, controlling for socio-economic characteristics and health facility fixed effects was done to test the association between insurance status and perceived quality of healthcare.

Results: This paper demonstrated that health insurance status matter in the perception of healthcare quality. The perceptions of the currently insured were found to be significantly more negative than that of the currently uninsured. Being currently insured was found to be associated with a significantly lower perceptions of non-technical quality of healthcare. Thus, once people are insured, they tend to perceive the quality of healthcare as poor compared to those without insurance.

Conclusion: These findings suggest that individuals’ perceptions of healthcare quality are shaped by their actual experiences at the health facilities. This provides an explanation for the low demand for health insurance in Ghana. Health insurance is less attractive as a result of decreases in healthcare quality. Policy makers should therefore consider implementing contracting and provider payment reforms that provide incentives to providers in the provision of quality healthcare to both the insured and uninsured.
Jo Durham, University of Queensland, Australia
Abstract ID: 2964

**Accounting for Non-governmental organisations in the Sustainable Development Goals: the case of diabetes programmes in Indonesia**

Co-authors: Hebe Naomi Gouda, Jo Durham, University of Queensland

**Background:** Non-governmental organisations (NGOs) and other non-state actors like academic institutions and corporations play important roles in achieving global health targets such as the Sustainable Development Goals (SDGs). However, while global goals provide comparatively clear mechanisms of accountability between intergovernmental organisations and Member States, the intersections between these frameworks and non-state actors remain ambiguous. Non-communicable diseases (NCDs) are relatively new to the development agenda and the SDGs aim to reduce premature deaths due to NCDs by one third by 2030. Given the multiple actors engaged in reaching this target – how, in what ways, and to whom, are non-state actors accountable for achievement of this target and how will this be operationalised? In this paper we use Indonesia, a middle-income country with a growing burden of NCDs and a pluralistic health system, made up of state and non-state actors, as a case study. We examine the role of non-state actors, and NGOs in particular, in delivering on the NCD agenda and the ways in which accountability frameworks influence their relationships and the way they work.

**Methods:** Realist synthesis is a theory-based approach to understanding complex social interventions. It focuses on strategies, contexts, mechanisms and their relationship to outcomes to understand how interventions work. Using Indonesia and diabetes, a complex disease, both in terms of its determinants and the interventions required to address it, as a case study, we developed a provisional framework to explain how accountability mechanisms such as those enacted through global targets ‘work’. Results: The provisional framework, or ‘program theory’ in realist terms, presents the first stage of our study, starting with the production of targets, how performance against these targets are presented, interpreted and disseminated and how different actors respond to these targets and how these actions promote accountability. Drawing on the theory of political economy of health, we illustrate how different actors resist, negotiate and adapt and how context influences these responses. This program theory will be further tested through an iterative process of qualitative interviews, ongoing literature review and expert feedback.

**Discussion:** For policymakers and practitioners engaged in health system strengthening and the achievement of the SDGs, the findings of this review will help uncover the assumptions and theories of change behind their policies and interventions and will inform future action. The realist approach complements more traditional synthesis and evaluation methods through its use of theory, its explicit recognition of complexity and its attention to context.
Antony Duttine, Handicap International, United States
Abstract ID: 424

Rehabilitation: Worth the Investment?

Co-authors: Antony Duttine, Anna Rupert, Handicap International

Background/Context: According to the Global Burden of Disease 2013, the rise of non-communicable diseases, injuries and ageing population are leading to growing years lived with disability (Vos et al. 2015). Health systems globally need to adapt in response to the rising number of people with health conditions that lead to morbidity.

Rehabilitation, considered a core component of universal health coverage by WHO (2012), has not yet been prioritized in the global health agenda. This may in part be due to the perception that rehabilitation services are expensive and cost-inefficient. The economic argument for rehabilitation is a key determinant of decision-making when resources are scarce, and it is therefore imperative that the economic argument be explored in order to implement change.

Methods: A literature review undertaken from November 2015 to February 2016 explored the cost-benefit and cost-effectiveness of rehabilitation, taking into account various models of rehabilitation in developing countries and potential findings that can be drawn from developed countries. Findings were then used to develop a discussion paper on the subject and how they pertain to the Global Burden of Disease.

Findings: Findings suggest that there can be a return on investment in rehabilitation, through prevention of future healthcare needs and enabling people with disabilities and their families to return to economic opportunities, and that rehabilitation programs can be cost-effective.

Discussion & Significance to the Sub-theme: It is imperative that more is understood regarding the economic argument for the provision of rehabilitation and the expense of not providing these services, in order to use economic findings to motivate health system improvement. Additionally, the vital role rehabilitation can play in the continuum of care needs to be acknowledged, as not just an end of the line measure but as a powerful prevention strategy in responding to shifting global health priorities.

To our knowledge, rehabilitation as a cost-effective response to changing global health trends has not yet been explored and therefore we feel this represents cutting-edge research.

Funding Source: Handicap International.
Building Resilient Health Systems: Interaction of Health Systems, Communities and Technology in design of strong Health Information Systems

Co-authors: Vikas Dwivedi, Alpha Nsaghurwe, Hermes Sotter, John Snow Inc; Ministry of Health, Tanzania

Purpose: Resilient health system need timely and complete data from all levels of the health system. E-health approaches are promising, however, current approaches to e-HIS (electronic health information systems) developments are often technology-driven, focused on disease-specific programs fostering the notion that e-health requires only technological innovation and one-time investment. The 2015 roadmap to strong health information system development (WHO, USAID & WB) identified the need for development of national health information systems architecture as an essential step to identify data needs and role of multiple sources of information systems required to improve accountability.

Focus/content: The Ministry of Health, Tanzania has formulated its health information system architecture and prioritized a need for interoperable health information system to improve provision of integrated care across the continuum of service delivery based on enterprise architecture. Interoperability between various health information systems will help in increased ability to triangulate and compare data across domains/tiers/functions and resources (horizontal across health sector); increase citizen access to health information (resources, providers, data from SHR); better continuity of care across program/facilities/health needs; and, improved data quality by reduced manual data entry/transfer. Collect data once and use multiple times.

We will share experiences of supporting the health systems in adopting a requirements based approach to design of health information system architecture and the need for interoperability to improve information system for health. Lessons learned on requirements gathering, use of appropriate technology as enabler and most importantly country ownership and a change management strategy will be presented.

Significance: Some of the key lessons learned are important to help design of robust national level health information system:

Effective collaboration with stakeholders and communities across different sectors is crucial to an enabling policy environment for national e-HIS development. The starting point for effective HIS/chIS development is on the data required for decision-making and for informing both clinical care and management across the different levels of the health system User-centered design - by keeping user needs, environment, and preferences at the center of project and product design HIS and software solutions are more likely to meet the needs of users at all levels. Planning for national at-scale implementation, versus pilots, and clear change management strategies to facilitate adoption of new e-HIS by users are important to guarantee success.
Target Audience: Health managers from ministries of health, technical agencies, and donors
Bassey Ebenso, University of Leeds, UK., United Kingdom
Abstract ID: 1033

De-constructing a complex programme using a logic map: Realist Evaluation of a novel Community Health Worker programme in Nigeria

Co-authors: Bassey Ebenso, Benjamin Uzochukwu, Ana Manzano, Enyi Etiaba, Reinhard Huss, Tim Ensr, James Newell, Obinna Onwujekwe, Nkoli Ezumah, Joseph Hicks, Tolib Mirzoev, University of Leeds, UK.; University of Nigeria, Enugu Campus

Background: Community Health Workers (CHWs) are an essential component of resilient and responsive health systems, within which they are a bridge between the community and formal health service to increase access to services. Although evidence shows that CHW programmes are effective in improving maternal and child health (MCH), greater clarity is required to understand what makes CHW programmes work, for whom and under what circumstances. This presentation draws lessons from using logic mapping as a tool to de-construct a multi-intervention CHW programme in Nigeria, which aimed to increase access to quality maternity services and improve MCH outcomes. The presentation should be of interest to policymakers and researchers interested in innovative approaches for evaluating and/or strengthening health systems.

Methods: A logic map (LM) is a graphic way of organizing and displaying information about a strategy, programme or policy. A coherent LM is a thread of evidence-based logic that integrates programme planning, implementation, evaluation and programme reporting. We used logic mapping as part of a realist evaluation framework, to assess whether the CHW programme in Nigeria worked, for whom and under what circumstances. The evaluation methodology involved 3 steps: initial programme theory development, theory validation and theory refinement. We share reflections on using logic mapping for the first evaluation step. To achieve this, we used logic mapping to graphically de-construct stakeholder’s (i.e. policymakers, implementers and researchers) thinking of how the programme should work, by illustrating interrelations between actors, context, implementation process, outputs and outcomes. Data for developing the LM was collected using documents review, email discussions and a technical workshop (for researchers and implementers), to untangle relationships between programme elements, and develop initial working theories.

Results: Logic mapping enabled stakeholders to collaboratively describe and link desired outputs and impacts to actual activities, to confirm that activities contribute towards achieving measurable final outcomes.

Discussion/conclusions: Logic mapping provided stakeholders with a shared language for, and an approach to strengthen learning at local levels, to build health system responsiveness. However, we experienced two challenges with using LMs. First, the LM depicted linear/simplified relationships between inputs, activities and outputs, or between outputs and outcomes whereas in reality, interrelations between and among inputs, activities and outputs, or between outputs and outcomes
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are more complex. Second, it was difficult to represent all relationships among programme elements in a single two-dimensional LM. Consequently, a series of (or nested) LMs were required to depict various components within the multi-intervention programme.
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Abstract ID: 2117

Implementing Evidence-Informed Primary Healthcare Operational Planning: Lessons from a Northern Nigerian State

Co-authors: Ejemai Eboreime, Usman Garba, School of Public Health, University of the Witwatersrand, Johannesburg, South Africa; Kaduna State Primary Healthcare Development Agency, Nigeria

Background: To ensure improved performance and equitable coverage of quality Primary Healthcare (PHC) interventions, Nigeria’s National PHC Development Agency initiated the PHC Reviews in 2011. The reviews involve a facilitated quarterly evaluation of PHC performance along with evidence-based operational planning of PHC interventions by Local Government (LG) PHC managers using routine data.

Methods: PHC reviews are implemented using a 4-step Diagnose-Intervene-Verify-Adjust (DIVA) process. ‘Diagnose’ identifies constraints to effective coverage using a modified Tanahashi Health Systems Bottleneck Analysis Model. ‘Intervene’ develops and implements action plans addressing identified constraints. ‘Verify/Adjust’ monitor performance and revise action plans.

We observed the processes and outcomes of PHC reviews in Kaduna state following one year of implementation. Kaduna state conducted its first PHC reviews in 2013 involving all LGs using the DIVA framework. The reviews focused on determinants for Availability of Health Commodities; Human Resources for Health; Geographical Accessibility; Initial Utilization; Continuous Utilization; and Quality Coverage of four PHC tracer interventions (Immunization, Integrated Management of Childhood Illnesses, Antenatal Care, and Skilled Birth Attendance). Another Bottleneck Analysis was conducted in 2014 to assess performance of operational plans developed in 2013.

Results/Discussion: Marginal improvements in effective coverage were observed across all interventions with the highest (11%) occurring in vaccination coverage while skilled birth attendance was least with only 1% coverage improvement. Lack of trained human resources was identified by all LGs as principal bottlenecks across all tracer interventions. This persisted after a year in spite of development of work plans to address identified constraints. Poor quality of services ranked next, however this may be largely attributable to human resource constraints.

Assessment of work plan implementation showed that 6 out of 23 LGs completed at least 50% of planned activities for the year. Of 1562 activities planned to address PHC intervention bottlenecks in the state, only 568 (36%) were completely implemented.

Although all LGs performed the “Diagnose-Intervene” steps of the reviews, implementation of the Verify-Adjust steps was weak due principally to constraints in financing and political will. This may have been responsible for the weak results observed. Furthermore, attendance sheets showed that, contrary to the design, the community was not involved in the process.
Conclusion: DIVA holds promise for effective bottom-up evidence-informed PHC planning in Nigeria, thus we recommend that government and all stakeholders provide adequate support for the complete process which can enhance PHC performance in Nigeria.
Ferry Efendi, Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, Taiwan, Taiwan
Abstract ID: 821

‘Back to Zero’: Views of Indonesian Nurse Returnees in Their Home Country

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Background: The increased aging population but shortage of caregivers and nurses in Japan had opened an opportunity to the movement of Indonesian nurses to this country under the Economic Partnership Agreement (EPA). In 2008, Indonesia started to send out nurses to work as caregivers under this bilateral agreement. This decision inflicted debates on the skills degradation issue, as the term of caregiver is often associated with a domestic job without requiring a professional training. Understanding the lifeworld of Indonesian nurse returnees is very important in order to contribute to the return migration policy in the nursing profession. This study aimed to explore the life courses of Indonesian nurse returnees after working as caregivers in Japan.

Methods: This qualitative study used a content analysis method, applying the snowball sampling technique to recruit study participants. The inclusion criteria were Indonesian nurses who had returned to Indonesia after working and living in Japan for minimum one year and were willing to participate in this study.

Results: This present study successfully interviewed 15 nurse returnees, 53% of them were female, and 87% were married. Four key themes were emerged from the data: (i) readiness to return; (ii) difficult journey; (iii) resource mobilization; and (iv) overcoming barriers. Among those themes, experiencing the difficult journey in entering the national labor market was mostly expressed by nurse returnees. Feeling like ‘back to zero’ was described by those returnees from suffering brain waste, being unemployed and struggling to find appropriate jobs.

Discussion / conclusion:The stories of nurse returnees in this study brought an important message to look at the return migration approaches comprehensively. The reasons of return and the situation they faced after arriving at homeland presented challenges linked to the cycle of migration. This present study found that skills degradation and brain waste issue has become the main concern of the nurse returnees in pursuing nursing jobs. Although they acknowledged support from parties involved in this scheme and brought back positive resources when they returned, nurse returnees expected more supports from the government to regain their nursing skill. Sustainability of this program must be addressed based on cooperative approach under the framework of Indonesia-Japan Economic Partnership Agreement.
Addressing ‘waste’ in health systems: A critical interpretive synthesis

Co-authors: Moriah E Ellen, Michael G Wilson, Marcela Vélez, Ruth Shach, John N Lavis, Jeremy Grimshaw, Kaelan Moat, Jerusalem College of Technology; McMaster University; Gertner Institute for Epidemiology and Health Policy Research; Ottawa Hospital Research Institute

Background: Health system leaders are continually pressured to make appropriate use of health system resources. Increasingly, health systems and organizations are exploring the issue of ‘waste’ and how to address the unnecessary use of health services. Our objective was to conduct a critical interpretive synthesis to understand: 1) whether, how and under what conditions health systems address ‘waste’ (i.e., agenda setting and prioritization); 2) how health systems have chosen to address the issue (i.e., policy development); and 3) how health systems have implemented approaches.

Methods: A critical interpretive synthesis approach was utilized for this work. We searched 15 databases in May 2015 to identify all empirical and non-empirical articles focused on overuse, disinvestment, waste, and value at a system level. Two reviewers independently screened records, assessed for inclusion and conceptually mapped included articles. Using the conceptual mapping findings, we selected a purposive sample of articles, and created structured summaries of key findings from each using frameworks related to government agendas, policy development and implementation, and health system arrangements. We used the structured summaries to thematically synthesize the results across the domains: agenda setting/prioritization, policy development and implementation.

Results: The search strategy identified 3537 references, from which we included 254 papers that were classified as relevant to agenda setting/prioritization (n=65), policy development (n=46) and implementation (n=60). The focus on disinvestment emerges from the need to not only ensure value for money spent on health systems, but also to prevent harm in patients. Approaches for undertaking disinvestment include: 1) processes to identify and diagnose the types of overused or misused health services (e.g., health technology reassessment); 2) stakeholder- or patient-led approaches (e.g., the Choosing Wisely campaign); and 3) government-led initiatives (e.g., changing lists of reimbursed products and services and using financial incentives or disincentives). Key implementation considerations include the need to develop ‘buy in’ from key stakeholders (particularly physicians) and citizens.

Conclusion: The need to ensure the use of high-value health services to keep citizens healthy and avoid harm is a priority across health systems. Our synthesis can be used by policymakers, stakeholders and researchers to understand how the issue has been prioritized, approaches that have been used to address it and implementation considerations. These approaches can help health system leaders incorporate changes in an evolving evidence base as well as stakeholder interests to address waste and an efficient and effective use of health system resources.
Khalifa Elmusharaf, University of Limerick. Ireland, Ireland
Abstract ID: 541

**Patterns of pathways to reach maternal healthcare in South Sudan: Lessons to learn for social inclusion and responsive health system.**

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Background: Maternity referral systems have been under-documented and under-researched. Undoubtedly, responsive emergency referral systems and appropriate transportation are cornerstones in the continuum of care and a crucial part of the complex health system. The pathways that women follow to reach EmONC once a decision has been made to seek care has received relatively little attention. The aim of this research is to identify patterns and determinants of pathways pregnant women follow from their houses when labour pains or complications occur until they reach the appropriate health facility.

Methods: This study was conducted in Renk County in Upper Nile State in South Sudan in the period from 2010 to 2012. Critical incident technique was used to systematically identify pathways to healthcare during labour, and determinants associated with an event of maternal mortality or near-miss through a series of in-depth interviews with those involved. This could include the husband, the mother, the in-laws, the sisters, the TBA, the midwives and, in cases of survival, the woman herself. Critical cases were identified through purposive sampling approach and snowball technique. A story was developed by summarising each event from all its related transcripts in order to gain a better understanding of it. The data was reanalysed by mapping the path of each incident that the patient followed from her house when labour pains or complications occurred until she reached the health facility.

Results: Once the decision is made to seek emergency obstetric care, the pregnant woman faces a very long journey that might involve many phases before she reaches an appropriate health facility. The functionality of the first point of service and the competencies of their providers determine the pathway to further care. In addition to appropriate referral, four patterns of pathway to comprehensive EmONC were identified and three of them were associated with high maternal death: late referral, zigzagging referral, and multiple referrals. Women who bypassed nonfunctional Basic EmONC facilities and went directly to comprehensive EmONC facilities were able to survive.

Conclusions: Our findings indicate that outcomes are better where there is no facility available, than when the woman accesses a non-functioning facility; the absence of a healthcare provider is better than the presence of a non-competent provider. Visiting non-functioning or partially functioning healthcare
facilities on the way serviced by non-competent providers places the woman at greater risk of dying. In conclusion, non-functioning facilities and non-competent providers contribute to the deaths of women.
Trends in hypertension and diabetes medicines utilization following changes in patient cost sharing in the "Farmácia Popular" program in Brazil

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Background Brazil launched the Farmácia Popular (FP) program in 2004 to improve access to essential medicines and expanded the program in 2006 to include private pharmacies. This paper describes changes in utilization and continuity of coverage for oral hypoglycemic (OH) and antihypertensive (AH) medicines following changes in patient cost sharing in the FP program.

Methods: Monthly program participation (PP) and percentage of days covered (PDC) were the two outcome measures Interrupted time series study using retrospective administrative data. The open cohort included all patients with two or more dispensings for a given study medicine in 2008-2012. The interventions were an increase in patient cost sharing in 2009 and zero patient cost sharing for key medicines in 2011. The use of PDC as an indicator in a longitudinal approach is innovative in the low and middle-income countries as well as the use in research of secondary data from a national information system, what can enforce health system decision-making.

Results: A total of 3.6 and 9.5 million patients receiving treatment for diabetes and hypertension, respectively, qualified for the study. Before the interventions, PP was growing by 7.3% per month; median PDC varied by medicine from 50-75%. After patient cost sharing increased in 2009, PP reduced by 56.5% and PDC decreased for most medicines (median 60.3%). After the 2011 free medicine program, PP surged by 121,000 new dispensings per month and PDC increased for all covered medicines (80.7%).

Discussion/Conclusion: Cost sharing is a barrier to continuity of treatment in Brazil's private sector FP program; making essential medicines free to patients substantially increased participation and continuity of treatment to clinically beneficial levels.
Health Systems in the Age of Mass Migration: From Migrant-Sensitive Health Policies and Services to Migrant-Inclusive Governance for Health

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Since 2010, the World Health Organization (WHO) has been promoting and supporting a national health system reform agenda aiming at developing migrant-sensitive health policies and services. However, the proposed approach has two significant limitations, in our opinion, (a) it underestimates the complexity of the migratory process by consigning migrants’ health to the health system; and, (b) it relegates to the margins fundamental, upstream social determinants of health such as living and working conditions, that are essential in the context of the migration experience. In this presentation we argue that the proposed migrant-sensitive health system approach should be expanded to a migrant-sensitive governance for health approach. Adopting the existing WHO governance for health model in the context of migration would stimulate the development of an integrated agenda for change involving multiple sectors, such as education, labour, the environment and social services, and positively impacting the health of refugees and migrants.
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Abstract ID: 3405

The role of organizational culture in the achievements and shortcomings of Ecuador’s Public Health System integration process

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Background: For decades, the Ecuadorian public health system has endured a high degree of segmentation. This has hampered the system’s performance, perpetuating inequalities in coverage, financial protection and access to care among its beneficiaries and threatening the country’s advance towards universal health coverage. As part of the reform process set in motion in 2012 to comply with the Constitutional mandate, the Ministry of Health created the Integrated Public Health Services Provision Network (RPIS) to promote coordination in the provision of care among the public health providers and to improve the system’s overall performance and responsiveness.

This paper aims to analyze the role played by the organizational culture in the achievements and shortcomings of the public health provider’s integration process and draw conclusions and recommendations to advance the integration agenda.

Methods: Literature review and data analysis from secondary sources.

Results: The analysis shows that organizational culture has played a central role in the integration process, opposing the integration agenda in fields such as the homologation of the benefits packet, clinical protocols, the model of care and per-capita health expenditure. However, progress has been made regarding the implementation of a single model of hospitals ‘cost centers, joint purchase of medicines and an increasing degree of coordination regarding patients’ referral and admission to hospitals and health centers.

Conclusions: The public health system’s integration process has made visible significant differences in the organizational culture of the institutions that make up the system, posing the need to understand and face those differences. Institutional identity, competency versus collaboration between the social security institutions and the Ministry of Health, the existence –or the lack of- standardized methods and rules for the management of health establishments and the provision of care and the acknowledgment of the Ministry of Health’s steering role stand out as the main issues to be tackled in the near future to consolidate the Integrated Public Health Services Provision Network.
Evidence-informed guidance to accelerate progress towards universal health coverage through the implementation of health benefits package at the level of primary health care

Co-authors: Racha Fadlallah, Fadi El-Jardali, Elie Akl, American University of Beirut

Background: The past few years have witnessed a growing movement across the globe for universal health coverage (UHC). UHC refers to the situation where all people who need health services can receive them without undue financial hardship. It is a critical component of sustainable development and poverty reduction, and a key element of any effort to reduce social inequalities and enhance access to health care. One of the key requirements for successful UHC programs is the design and implementation of health benefit packages that provide essential health services coverage for the population. This study describes the process of guiding the implementation of essential health benefit package in Lebanon through the development of a systematic review and the subsequent use of knowledge translation tools.

Method: We completed a policy-relevant systematic review on the barriers and facilitators to the implementation of health benefits package at the level of primary health care in low-income and middle-income countries. The systematic review complied with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. We synthesized the findings according to the following health systems arrangement levels: governance, financial, and delivery arrangements. We then applied knowledge translation tools and mechanisms to inform the implementation process in Lebanon.

Results: Of the 15510 identified citations, 10 met the eligibility criteria. The included studies identified a set of barriers and facilitators that need to be addressed at the governance, financial and delivery arrangement levels of health systems in LMICs for successful implementation of the package at the level of primary health care. Following the production of systematic review, we developed a guidance brief which drew on the findings from the systematic review. The guidance brief was disseminated to the ministry of health and other key stakeholders in personalized debriefings. We are currently working with the ministry to ensure the evidence is being used to guide the implementation process in Lebanon. The findings, outcomes, and lessons learned will be discussed in details during the presentation.

Conclusion: To achieve UHC, policymakers and stakeholders need to make sure that facilitators to package implementation are in place at the governance, financial and delivery arrangement levels of their respective health systems. This is crucial to promote efficient use of scarce resources and promote sustainable resilient systems. Importantly, interactions between researchers and policymakers, including appropriate methods of knowledge transfer is critical to promote the use of evidence from research to inform the decision-making process.
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Abstract ID: 48

Social Capital and Active Membership in the Ghana National Health Insurance Scheme - A mixed method study.

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Abstract: Background: People’s decision to enroll in a health insurance scheme is determined by socio-cultural and socio-economic factors. At the request of the National health Insurance Authority (NHIA) in Ghana, our study explored the influence of social relationships on people’s perceptions, behavior and decision making to enroll in the National Health Insurance Scheme. This social scheme, initiated in 2003, aims to realize accessible quality healthcare services for the entire population of Ghana. We looked at relationships of trust and reciprocity between individuals in the communities, called “horizontal social capital”, and between individuals and formal health institutions, called “vertical social capital”, in order to determine whether these two forms of social capital inhibit or facilitate enrolment of clients into the scheme. The results could potentially support the NHIA in exploiting social capital to reach its objective and to strengthen its policy and practice.

Method: We conducted 20 individual- and 7 key-informant interviews, 22 focus group discussions, 2 stakeholder meetings and a household survey, using a random sample of 1,903 households from the catchment area of 64 primary healthcare facilities. The study took place in the Greater Accra Region and the Western Regions in Ghana between June 2011 and March 2012.

Results: While social developments and increased heterogeneity seem to reduce community solidarity in Ghana, social networks remain common and are valued for their multiple benefits (i.e. reciprocal trust and support, information sharing, motivation, risk sharing). According to healthcare clients, trusting relationships with healthcare and insurance providers are based on the providers’ clear communication, attitude, devotion, encouragement and reliability of services. The active membership of the NHIS is positively associated with community trust, trust in healthcare providers and trust in the NHIS (p-values are .009, .000 and .000 respectively).

Conclusion: Social capital can motivate clients to enroll in health insurance schemes. Fostering social capital through improved information provision to communities and engaging community groups in healthcare and NHIS services could facilitate peoples’ trust in these institutions and their active participation in the scheme.
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Abstract ID: 2728

**Determinants of population health in Uganda**

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**Background:** The relative contributions to population health of the health system, of individual access to healthcare and of household socioeconomic resources are incompletely understood. In Uganda, the overall capacity of the health system to deliver services to the population has not improved since 2001, yet some improvements in population health have been reported. We describe population health changes in Uganda, characterize their determinants including access to healthcare and socioeconomic resources, and explore implications for the role of the health system in the greater context of development.

**Methods:** We extracted three types of indicators from the nationally representative Uganda Demographic and Health Surveys (DHS): 1) ten indicators of population health, 2) six indicators of access to health services and 3) five indicators of socioeconomic resources. We compared frequencies from 2001 to 2011 to describe indicator changes and we created a model to test for associations between changes in health indicators, changes in health access indicators and changes in socioeconomic indicators using newly available data from the 2016 DHS. We assessed five-year interval trends in composite measurements of indicators from 2001 to 2016 in comparison with policy analysis to explore the political basis for observed trends.

**Results:** From 2001 to 2011 we observed improvement in seven of ten key indicators of population health, with greatest improvements in adult nutrition and child mortality. We observed no change in one indicator (planned pregnancies) and worsening of two indicators (infectious disease burden and tobacco use). We observed improvement in all six indicators of access to health services, with greatest improvements in uptake of HIV testing, children born in a health center and medical care sought for childhood illness. Utilization of public health services increased 2.7 times more than utilization of private services, with public services providing most care in 2011. We observed improvement in four of five indicators of socioeconomic resources, with greatest improvements in hand-washing facilities and bednets, and no change in one indicator (employment).

**Discussion:** The health of Uganda’s population has improved significantly since 2001 with sizeable reductions in malnutrition and mortality, despite the stagnation of the health system. These improvements are likely attributable to increased household socioeconomic resources and improved access to healthcare, especially public health services. Health indicators that remained unchanged or worsened may be health system-dependent and could be priority areas for health system improvement.
**Exploration of barriers and facilitators to access to care and services for persons with hepatitis C**

Co-authors: Veronique Foley, Geneviève Petit, Michele Reitman, Kristel Boisvert, Marie-Josee Giraud, Astrid Brousselle, Université de Sherbrooke ; CIUSS-CHUS Estrie

Background: The study aims to document the experiences of those affected by hepatitis C with respect to the prevention, screening and treatment to better understand the determinants of health trajectories and access to the health system.

Methods: Through an participatory evaluative research with researchers, practitioners and communities, we conducted a thematic qualitative analysis of four focus group interviews with people affected by hepatitis C. Two interviews consisted of people at risk of contracting hepatitis C, the third joined people diagnosed HCV positive but untreated and fourth targeted people who had access to treatment. A mapping strategy was used to understand people’s experiences of care and services.

Results and discussion: We identify the drivers, barriers and facilitating factors, trajectories of health and care of people affected by hepatitis C in two periods of life: from the injection to screening and from HCV diagnosis to treatment. Life trajectories in relation to hepatitis C are the product of many influences: the experience personal life, the attitude of healthcare staff, the organization of the health system and contingent factors.

Conclusion: Understanding of the experience of life for people affected by hepatitis C is essential to identify potential levers of change and new ways to organize the health system in order to reach them more effectively.
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Abstract ID: 3075

Critical Assessment of Rural Health Purchasing Arrangements in China

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Background: Strategic health care purchasing aims at maximizing health system performance and takes the health preference of people as basis to decide which interventions should be purchased, how they should be purchased and from whom. At present, the purchasing arrangements are not perfect and several issues should be resolved urgently. Moreover, the limited research findings are not able to put forward reasonable and effective solutions. Therefore this study is necessary and meaningful. The objectives of this study is to describe purchasing arrangements in China, analyze hinder factors which influence system performance, and propose what roles are purchasers expected to play in progress towards universal health coverage (UHC) from the perspective of strategic purchasing.

Methods: A case-study approach was adopted in this study, with qualitative analysis of interviews with focus persons. Two counties from Qinghai province and two from Henan province were selected as the study sites. Operational data on NCMS and data from health institutions were collected with a specially designed questionnaire. Key informants were interviewed, including 88 key interviewees (doctors, patients, researchers and health administrators).

Results: The results suggest government and purchasers have implemented policies and taken action to achieve the equity outcome, and equity has gradually improved; Meanwhile, innovations such as mixed provider payment methods, clinical pathways and provider claim auditing have been adopted at study sites to control costs and improve quality of healthcare; Moreover, mutual accountability and governance mechanisms have been established through the reporting system, complaints system, supervision, and information transparency, but some aspects need to be enhanced in practice; Finally, quality control and improvement strategies have been designed and applied through contracting arrangements, quality and performance assessment, adoption of clinical pathway management and the reporting system.

Conclusions: To promote equity and efficiency of NCMS purchasing mechanism, health technology assessments should be introduced and implemented to formulate benefit packages; citizens’ opinions and preferences need to be ascertained and addressed; Pricing negotiation process between purchaser and providers should be modified; A unified health information system should be established for quality control.
Suzanne Fustukian, Institute for Global Health and Development, United Kingdom
Abstract ID: 2921

‘Leaving no one behind’: protecting vulnerable groups in fragile and conflict-affected situations

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Background: Vulnerable groups, such as people with disabilities (PWD), the chronically ill, women-headed households and older people, are profoundly affected by war and political and economic crisis. Their needs are often overlooked and/or neglected and, even at the end of war or crisis, many continue to experience multiple vulnerabilities. Rebuilding health systems in such situations often includes commitment to address health equity goals, but given other priorities post-conflict, these are often left unfulfilled. Linking health equity with social protection instruments, including fee waivers, targeted cash transfers and subsidies, may boost people’s resilience. As part of a study on rebuilding health systems following conflict or crisis, life histories were undertaken to explore people’s experience responding to their and their families’ health needs before, during and after conflict, including coping strategies used and presence of beneficial social policies.

Methods: Primary data was collected over two years from September 2012, consisting of 1) in-depth life histories with respondents over 40 years in Cambodia (24 respondents), over 45 in Northern Uganda (47) and Zimbabwe (51), and over 50 in Sierra Leone (30); 2) semi-structured interviews with key informants (41); 3) document review.

Results: The life histories revealed not only the immense impact that conflict and social/economic crisis had on people’s social worlds, particularly the depletion of kin/social networks that offer informal social protection, but the important role that formal social protection mechanisms offer. The Health Equity Fund in Cambodia, the Free Health Care Initiative in Sierra Leone and the Assisted Medical Treatment Order (AMTO) in Zimbabwe played an important role in buttressing household efforts to meet health costs. Unfortunately, the AMTO has declined in effectiveness due to underfunding in recent years, leaving chronically ill and elderly people without adequate assistance. In Sierra Leone and Northern Uganda, the absence of effective social protection was noted, even though fee exemptions previously existed for the elderly and PWD in the former while user fees were abolished in the public health sector in Uganda. Costs were widely incurred by respondents for health-related costs—transport, drugs, and diagnostic tests. Across all countries, social capital, indebtedness, and asset sales were deployed to meet health costs or, if none available, self-care.

Conclusion: Synergies across health and social welfare sectors may contribute significantly in bolstering the coping capacity of vulnerable groups. Policy coherence across related health and social protection systems can enhance resilience of vulnerable groups, matched by adequate external and domestic resources.
Pedro GALVAN, Research Institute of Health Sciences / Ministry of Public Health, Paraguay
Abstract ID: 1043

Cost-benefit of innovative telediagnosis technology in low-resource settings

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Clinical background: In low- and middle-income countries many people don’t have access to appropriate health technologies. In the context of universal coverage and the efficient use of available resources in public health which should be directed towards greater equity in the provision of services, greater concern for the effectiveness and usefulness of health technologies, there is a favorable opportunity to develop telemedicine in developing countries as a tool to improve health care in remote locations without access to specialists. This study, performed by the Telemedicine Unit of the Ministry of Public Health (MoH) in collaboration with the Research Institute in Health Sciences (IICS-UNA) and the University of the Basque Country (UPV / EHU) served as a pilot project to evaluate the potential cost-benefit of a telemedicine system in public health. For these purposes, we analyzed the results of a pilot project using innovative health technologies implemented in all remote regional and district hospitals in Paraguay.

Methodology: This is a prospective study, where we analyzed the cost-benefit results of a pilot project over two years 2014-15, using telemedicine for diagnosis implemented in all remote regional and district hospitals as innovative health technologies in the public health in Paraguay. For these purposes, the cost-benefit analysis was carried out by comparing the cost of performing a telediagnosis tool versus the cost of performing it by patient referral to a comparable diagnosis center in the capital city.

Objective: evaluate the cost-benefit of implementing an innovative telediagnosis technology

Results: During the pilot project time 2014-15, 34,096 remote diagnostics were conducted in the main 16 regional and 9 district hospitals using the telediagnosis tool. Of all remote diagnostics modalities performed, 38.0% (12966) corresponded to tomography studies, 61.9% (21111) to electrocardiography (ECG) and 0.1% (19) to ultrasound studies. The average cost of a telediagnosis was 2.6 USD. Meanwhile, the average diagnostics cost performed by medical specialist “face to face” in the capital city for tomography, ECG and ecography was 68.6 USD, 11.8 USD and 21.5 USD respectively. The cost reduction through the telediagnosis was 26.4 times for tomography, 4.5 times for ECG and 8.3 times for ecography. The cost-benefit analysis performed demonstrates the economic benefit of 2.4 Million USD for the 25 communities included in this project.

Conclusion: the telediagnosis decrease referrals, improve access and optimize the use of scarce health financial resources in low incoming countries. Acceptance of the technology and satisfaction should be considered.
ASHA beyond RCH – Role played by Mitanin Community Health Workers in management of TB, Malaria and Leprosy in India

Co-authors: SAMIR GARG, State Health Resource Center, Chhattisgarh

Background: ASHA program involving around 900,000 Community Health Workers (CHWs) across India is credited with many improvements in health over last decade especially in indicators of Reproductive and Child Health (RCH) like increase in institutional deliveries and immunization. It has also been critiqued (including in the Lancet recently) for ASHA’s role getting limited to RCH. Diseases like Malaria and TB continue to be huge health challenges in India. Evaluations show that ASHAs do play a role in Malaria and TB but it is constrained by gaps in training, support and supply of drugs.

Chhattisgarh state has operationalized a significant role for 70,000 CHWs (known as Mitanins) in management of TB, Malaria and Leprosy.

Methods: During 2010-2015, 70000 Mitanin CHWs covering 25 million population were trained for community-based care involving a) Diagnosing malaria by using bivalent Rapid-Diagnostic (RD) tests of suspected cases and treating it using Chloroquine or ACT b) Active search for TB and Leprosy suspects and referral for confirmation. Annual social mobilisation campaigns were carried out on malaria prevention. Bi-annual door-to-door search campaigns were carried out to identify and refer TB and Leprosy suspects.

Data was collected through monthly reports and verified through field visits. An assessment was done for randomized sample of 665 CHWs.

Results: CHWs made 1.4 million RD-tests confirming 290,000 malaria cases. This expansion in testing resulted in more than doubling the number of annually confirmed malaria cases over earlier years. The sample assessment shows a) 76% of CHWs had RD tests and 82% of them utilized them b) 90% CHWs had Chloroquine and 39% had ACT. The sample assessment shows that CHWs treated 86% of cases identified by them and referred the rest.

Referrals for sputum examination for TB went up by 51% in two years to reach 652 per 100000 population. Another advance was in improving contact tracing and identification of pediatric cases.

Leprosy referrals increased by 34% over two years with 11400 confirmed new cases identified in 2015.

Conclusions: Significant progress was made by Chhattisgarh in managing malaria, TB and Leprosy by involving CHWs. Defining such action as a priority for CHWs and their support–structure, adequate training and skill-building support, supply of drugs and rapid diagnostics and were facilitative inputs. Understanding potential of large CHW programs like ASHA in management of malaria, TB and Leprosy can offer major gains for health-system in India. CHW research and practice need to respond to this.
Surekha Garimella, Public Health Foundation of India, India  
Abstract ID: 2743

**Posting and Transfer practices at the frontline and their unintended contribution to Health System Responsiveness and Resilience**

Co-authors: Surekha Garimella, Lakshmi Joysula, Bhaskar Purohit, Gupteswar Patel, Kabir Sheikh, Public Health Foundation of India; Indian Institute of Public Health

**Background:** Adaptive and resilient health systems rely on having the right health workers in the right place at the right time. Postings and transfers (P&T) is a core function, particularly in large public sector health systems, for achieving appropriately staffed health services and ultimately the goals of the health system. Weak governance of this crucial health system function often undermines systems resilience through poor responsiveness and performance. We undertook a study on P&T policies and practices in four provinces of India to address empirical and conceptual gaps. Here we focus on the boundaries and interfaces between formal and informal P&T practices created, adopted and implemented by administrators and frontline workers and draw out the implications for system responsiveness and resilience.

**Methods:** Our research methodology included using a qualitative case study approach with an action-centred implementation analysis framework. We undertook bounded case studies in four provinces of India that focused on the real world experiences of P&T among health system actors across the various tiers of the health system. Analysis of data was done using the ‘framework approach’.

**Results:** In the real world of P&T practice, formal policy implementation co-exists with informal practices conceived and initiated by both administrators and frontline health workers. Informal practices that sometimes mimic formal policy implementation are adopted both by front line workers and administrators to cope with shortages of workers in the system. These practices to a large extent are responsible for keeping the services functional even amongst shortages of health workers. Although not the norm, semi formalisation of informal practices is not uncommon and can be viewed as an innovative way in which health system actors work at keeping the system responsive. Administrators exercise a combination of authority and caring for and nurturing front line workers and perform the very difficult task of delivering services.

**Discussion:** The interface of policy, practice, intent and implementation coalesces as a space where formal and informal practice remain both harmonious and disharmonious but still contributes towards keeping systems responsive. Whether by intent or not health system actors through their practices contribute in keeping systems responsive and resilient through innovation and adaptation of P&T practices at the frontline, at least in the short run.
Zachary Gately, Adventist Health International Tchad-Bere Adventist Hospital, Chad
Abstract ID: 2130

The process of implementing a multi-subject health survey in rural southern Chad.

Co-authors: Zachary John Gately, Olnee Charis McLarty, Marie-Clarie Boutrin, Sharilyn Marci Anderesen, Adventist Health International Tchad-Bere Adventist Hospital; Loma Linda University School of Public Health; Loma Linda University

Background: Accurate statistics in rural central Africa are extremely hard to find. Bere Adventist Hospital began in the 190’s as a clinic that has grown into the multi-service privately operated Tandjilé Centre district hospital with many strengths in surgery, maternity, and community health. Community health outreach began in 2011 by S. Marci Andersen with health education and the implementation of a Community Health Volunteer network. Since 2013, it has grown to include much of the district with rural health education and mobile clinics. In 2015, Andersen proposed a survey be conducted in the city of Bere (39,000 population) to understand the effect of CHVs as well as provide baseline health statistics. At first, it was questioned whether this could be pulled off with such limited education levels and the large area to cover.

Methods: Marie-Claire Boutrin developed the survey from Loma Linda University School of Public Health January 2015. Olnee McLarty and Zachary Gately began collecting feed-back from local government as well as supervising translation and logistics. Training was 10 days over three weeks April 2015 with 4 revision days in May 2015. 47 CHVs attended training, 32 with 100% attendance, 32 collected surveys. Survey collection began June 1.

For training participation, each CHV received 2 soap cubes ($0.50USD each), while those who came 100% were given an additional bottle of lotion ($1.00USD). For each properly completed survey, a team of two people received 1 soap cube.

Satellite mapping was used to randomly tag houses to survey. Each team used maps of 200mx200m sections of Bere with 0-14 houses per square.

Results: 600 buildings were surveyed with the majority being residence. Some were businesses or uninhabited, therefore were not surveyed. Survey training began difficult due to education and literacy levels. Practice provided the best understanding. All CHVs preferred to complete the survey using French verses Local Arabic or Nantchire. Two teams completed +100 surveys each. In April, many people were frustrated and tired, especially with reading maps but by July, it was lifting moral because they were seen as important in their community.

Discussion and Conclusion: This survey provided much needed health statistics for Bere city. The process of the survey boosted moral, tightened relations, and validated the role of CHVs. It came at important time due to low crop yield in 2015. It also helped us better understand community needs and how to administer a survey in such conditions.
Meenakshi Gautham, London School of Hygiene and Tropical Medicine, United Kingdom
Abstract ID: 1698

**Socio-economic and caste related inequities in coverage of contacts and interventions for maternal and newborn health in Uttar Pradesh, India**

Co-authors: Meenakshi Gautham, Joanna Schellenberg, Tanya Marchant, London School of Hygiene and Tropical Medicine

**Background:** Several Low and Middle Income Countries (LMICs) have achieved declines in maternal and child mortality, but inequities in the coverage of life-saving interventions persist. Inequities may be socio-economic, educational, age, gender or religion/ethnicity related. In India, the caste system that divides Hindu society into a hierarchy of social groups, has created social disadvantages for the lower castes. We analysed socio-economic and caste related inequities in coverage of contacts and life-saving interventions for antenatal, intrapartum, postpartum and postnatal care in Uttar Pradesh state in India.

**Methods:** A household survey was conducted in November 2012 in 80 villages across 40 blocks of six districts. 604 resident women with a live birth 12 months preceding the survey were interviewed about the care they received. Households were divided into five equal sized quintiles, from most poor to least poor, using principal components analysis. We used the government of India’s groupings to categorise households into (1) Scheduled Castes and Tribes (SCs/STs) (2) Other Backward Classes (OBCs), and (3) General Castes. Associations between coverage indicators, and socioeconomic quintiles were analysed using chi square test for trend, and for caste with chi2 test of difference.

**Results:** We found more socio-economic than caste based inequities overall, predominantly for seven indicators of contact. Poorer women reported fewer antenatal contacts, ranging from 63% of poorest having at least one ANC to 85% of the least poor, p&lt;0.001. Delivery by a skilled attendant ranged from 62% in the poorest women to 86% of least poor, p&lt;0.001). Inequity by caste was observed only in contact with a skilled health worker during pregnancy, reported by 65% general caste women, 68% OBCs and only 56% of SCs/STs (p≤0.05).

Socio-economic inequity in coverage of nine life-saving interventions was found only for two indicators. Caesarean births ranged from 4% in the poorest women to 17% in the least poor, p&lt;0.05. BCG vaccination of infants aged 6-12 months ranged from 74% in the poorest infants to 93% in least poor, p≤0.001. Caste based inequity was observed only for delayed bathing of the newborn; more SC/ST women reported delayed bathing than the higher castes (23%, 38%, p≤0.002).

**Conclusions:** Household socio-economic status is a greater source of inequity than caste in women’s contact with the health system in Uttar Pradesh. There is relatively little inequity once contact has been made. The public health system needs to identify and contact the poorest women irrespective of caste.
Ludovica Ghilardi, London School of Hygiene and Tropical Medicine, Uni
Abstract ID: 2751

Where are we going? A proposed framework for identifying spaces of vulnerability and measuring effectiveness of interventions to improve health outcomes in those spaces

Co-authors: Caroline A Lynch, Ludovica Ghilardi, Diane Duclos, Adrienne Testa, London School of Hygiene and Tropical Medicine

Purpose: We propose a framework to identify, intervene and measure the effectiveness of interventions aimed at improving health outcomes of populations living in, and moving through, spaces of vulnerability (SoV).

Spaces of vulnerability are areas where migrants and mobile populations live, work, pass through or originate. Internal migration and urbanization are increasing worldwide and impacting all sectors of society, including health systems. As a result, health systems face several challenges: responsiveness to changing health patterns and risks in spaces of vulnerability, and assuring continuity of care and high quality migrant-friendly services. Yet, there is limited guidance as to how to identify SoVs associated with mobility within a country’s national borders. In addition, there is a limited of evidence for interventions aimed at improving health outcomes for populations within SoV.

Focus/content: The concept of SoVs is based on the understanding that health vulnerability stems not only from individual factors but also a range of environmental factors specific to the unique conditions of a location, including the relationships among mobile and sedentary populations in the area (IOM, 2013). However, there is no standard way of identifying these spaces or understanding their dynamics. Our work focuses on standardising methods for identifying ‘spaces of vulnerability’ including identifying data sources.

In addition, we systematically review interventions targeted at improving health outcomes in SoVs to understand the range of potential interventions being used, the strength of evidence underpinning them, and gaps. We propose a framework, including potential data sources, for monitoring and evaluating healthy migrant interventions.

The proposed conceptual framework originates from: a literature review on internal migration and health, a policy documents review, a review and consolidation of conceptual frameworks around mobility and health and a systematic review of methods to identify spaces of vulnerability and interventions to improve health of populations who live, and pass through, SoV.

Significance for the sub-theme area/field-building dimension of relevance and target audience: There is currently no existing, integrated framework that assists the identification of SoV, or understand how interventions used in those spaces will effect change to populations health outcomes. IOM has identified the need to generate more data and evidence in this area, and to understand the effectiveness of interventions. Thus there is an urgent need to understand mobility-related health issues and interventions to prime health systems for sudden changes or shocks that occur as a result of rapid or ongoing mobility.
Brenda Gibson, Nottingham Trent University, United Kingdom
Abstract ID: 2636

**Challenging the Structural Determinants of Health to enable resilience in primary healthcare systems**

Co-authors: Brenda Linda Gibson, Nottingham Trent University

**Purpose:** Resilience is a core, though contested, global health discourse and building resilient communities are viewed as key to achieving both the Sustainable Development Goals and the investment in health approach. Building on experience of working in cross disciplinary partnership approaches with communities in sub-Saharan Africa (specifically Uganda) and the UK as an academic researcher, this paper argues for the need to critically analyse, right at the beginning, the contextual and political drivers that create ‘structural determinants’ of health and inequalities.

**Content:** Health has shifted both its disciplinary base and its traditional boundaries and can be viewed as: a global public good; a core component of collective human security; a key factor of good global governance; responsible business practice and social responsibility; and global citizenship and human rights (Kickbusch, 2004). Critiques by Global South civil society actors, among others, call for a still more comprehensive, radical and integrated approach. These voices challenge continued policies and institutions that exert ‘structural violence’ on communities and countries that prevent the achievement of resilient strong universal primary health care systems.

In the global health arena resilience emphasises networks and the importance of partnership and shared responsibilities but usually neglects inequalities (Wilkinson & Leach, 2014). Explanations of the recent Ebola outbreak were attributed to weak health systems and/or low resilience of local communities but this analysis is recognized as depoliticised- and de-contextualised with little understanding of the violence exerted by social, economic and political structures (ibid). Resilient health systems should be built on inclusive economies and institutions.

**Significance:** There is an urgent need for a multi-disciplinary analysis that values social theories, understands notions of power and political economy and how these contribute to disease outbreaks, for example, and how institutions and policies inflict avoidable harm. Development models themselves, still organized around an aid-centric and economic model, continue to mitigate against resilience as we saw in the Ebola outbreak. Thus, this paper calls for new partnership knowledge alliances to bring a synthesis relevant to both the Global North and South that offers opportunity for wider exchanges in the debate about building resilient health systems bringing different approaches to a common area of interest.

**Target Audience:** Academics; Social theorists; health policy analysts; civil society actors
Amrita Gill, IPE Global, India
Abstract ID: 1762

Integration of web based monitoring system and m health to measure and address inequities in maternal health services in Haryana, India

Co-authors: Amrita Gill, Nidhi Chaudhary, Asif Jeelani, Rajiv Rattan, Usha Gupta, Amit Phogat, Rupinder Sahota, IPE Global; National Health Mission, Haryana

Background: National Health Mission (NHM) Haryana has established a web based reverse tracking system to identify severely anemic women at the time of delivery. It facilitates identification of health posts reporting gaps in antenatal care service. All deliveries conducted in public health facilities are recorded through this web based portal. Data from this portal was analyzed for inequities.

Methods: The web based portal was accessed and line list of deliveries conducted in financial year 2014-2015 was generated. The data was cleaned and analyzed using Epi-info software. The prevalence of anemia and the risk of severe anemia according to caste, religious minorities and residence was seen. Based on the findings, a m health pilot intervention has been designed.

Results: A total of 2, 49, 357 deliveries were reported from government health facilities in Haryana in the year 2014-2015. Among them prevalence of mild, moderate and severe anemia was 13%, 79% and 4% respectively. At the state level there is significant risk of severe anemia in religious minorities (Odds ratio (OR)-2.3) and rural residents (OR – 1.2). There is no significant risk in caste minorities (OR – 1.05). Disaggregated data for 21 districts showed high risk of severe anemia in caste minorities in 8 districts while 5 districts have higher risk for urban population.

The m health intervention intends to reduce inequities in service coverage. The three pronged strategy includes – health literacy to empower families; facilitating service delivery of Home based Postnatal and Newborn Care (HBPNC) and prioritization of health post for supportive supervision based on severe anemia detection.

Standardized text messages and call content for maternal and newborn care has been developed. A total of --8984 SMS have been sent to families of severely anemic women in last 4 months. Calls to families with severely anemic women will be done for advice and follow up on compliance of care practices. Trigger and reminder SMS will be sent to front line workers for improving HBPNC visits. Monthly e-mail with prioritized health posts are being sent to block medical officers.

Conclusions: Widespread inequities in terms of higher risk of severe anemia was seen in religious and caste minorities in Haryana. Real time data through online portal and penetration of mobile phones in 79% population provides a potential opportunity for use of mHealth to improve health outcomes. This intervention will reach out to nearly 120,000 families (including 9000 through calls) in a year.
Sarah Gimbel, University of Washington, USA
Abstract ID: 919


Co-authors: Sarah Gimbel, Roxanne Hoek, Joao Luis Manuel, Alusio Pio, Orvalho Augusto, Catherine Michel, Bradley Wagenaar, Kristjana Asbjornsdottir, Kenneth Sherr, University of Washington; Health Alliance International-Mozambique; Beira Operations Research Center; Mozambique Ministry of Health; University of Eduardo Mondlane; Health Alliance International, Mozambique

Background: In resource-limited health systems, accurate, high-quality health data are inconsistently available. Substantial investments have been made to improve the quality and availability of essential health services, and monitor and evaluate effective strategies to increase data access and utilization. However, weak data systems continue to undermine these efforts. This multi-year project was designed to strengthen data systems and stimulate data-driven decision-making in Mozambique.

Methods: A methodology to assess health information system quality, combined with ongoing feedback to strengthen data usage at the health facility, district, and provincial levels was developed. Annual clinic-level data quality audit performance summaries and feedback were provided to health providers and managers. Twenty-seven of 156 facilities were purposively selected from 13 districts in Sofala province. Data audit and feedback activities targeted data availability, reliability, and consistency across multiple health service levels, including service registries, monthly facility and district reports, and computer-entered data at the district and provincial levels.

Results: Over five years of audit and feedback, composite measures of data consistency improved from 54% (2009) to 87% (2013). High and consistent improvement in data reliability was noted across four indicators: outpatient consults (+45%), DPT3 (+32%), institutional births (+31%) and ANC1 visit (+27%). Data availability across the health system improved, from 84.3% to 99.1%.

Discussion/Conclusions: Findings demonstrate that effective data quality audits should be done repeatedly and at scale, and include systematic, written feedback mechanisms that ensure results are disseminated appropriately and are accessible to health managers and workers across the health system.
Celso Give, University Eduardo Mondlane, Mozambique
Abstract ID: 3439

Barriers and facilitator to referral system in primary health care in Mozambique. Perspectives of communities, supervisors and community health worker in Moamba and Manhiça.

Co-authors: Celso Give, Sozinho Ndima, Meghan Bruce, Miriam Taegtmeyer, Moshin Sidat, University Eduardo Mondlane; Department of International Public Health, Liverpool School of Tropical Medicine

Background: A Community Health Worker (CHW) Program is a strategy of the Mozambican Health System to enhance access to health care mainly in rural areas. The scope of work of CHWs includes health promotion, disease prevention and specified curative care for rural communities. Additionally, CHWs are trained to identify and refer patients with illnesses and other physiological conditions (e.g. pregnancy) that they are not able to care for. However, the referral has proven difficult and this study aimed to analyze the opportunity and challenges on primary health care in Mozambique, exploring facilitator and barriers on reference of communities to health facilities by CHW.

Methods: The study was done in Manhiça and Moamba Districts of Maputo Province, in Mozambique. In-depth interviews (IDI) were conducted with CHWs and their supervisors (health workers). Additionally, focus group discussions (FGD) were conducted with community members (including leadership). Both, IDI and FGD were conducted in Portuguese and when necessary in local languages by use of semi-structured guides. IDI and FGD were recorded and transcribed. The analysis carried out of Portuguese versions of transcription were verified for quality and read time and again for identification of themes and sub-themes related to barriers and facilitators of successful referral of patients by CHWs to health facilities.

Results: A total of 11 CHWs (6 female) and 6 supervisors (2 female) participated in IDI. There were 7 FGDs conducted with community members with a total of 58 participants (47 male). All participants acknowledged value of referral and its contribution in enhancing quality of care of patients. Some factors identified by participants as barriers for successful referral were related to health system, but others were related to community perceptions of continuity of care. The findings were systematized and presented in the poster as barriers and facilitators identified by each group of participants.

Discussion/conclusions: The referral and feedback system has a valuable role in continuity of care of patients observed and referred by CHWs in rural remote areas. Strategic interventions for modifiable barriers can be implemented and which will contribute for enhance quality of care of patients, but also strengthen skills of CHWs in clinical care and reinforce their role within the overall health system in rural Mozambique.
Michael Gluck, AcademyHealth, United States
Abstract ID: 425

**Can Evidence Reviews Be Made More Responsive to Health Policymakers? An Analysis of Approaches**

Co-authors: Michael Edward Gluck, Samantha Smith, Lauren Gerlach, Kristin H. Rosengren, AcademyHealth

**Purpose:** To examine alternative strategies for making evidence syntheses timely and responsive to policymaker needs with a particular emphasis policymaking environments with limited resources.

**Focus/content:** This presentation will draw on current work being undertaken by AcademyHealth with funding from the Robert Wood Johnson Foundation to develop and test processes to credibly, but rapidly identify, synthesize and present evidence in response to requests from health policymakers. Drawing on lessons from these pilot reviews as well as an environmental scan of rapid evidence review programs established in both HICs and LMICs, this presentation will explore five major approaches for making evidence reviews more responsive to health policymakers’ needs: (1) efforts to reduce the amount of time required to complete reviews by eliminating steps from traditional systematic review processes, adding resources, or automating the search of evidence or extraction of relevant data; (2) including credible evidence from the grey literature that may be more current and relevant than the peer-reviewed research literature; (3) presenting the results of evidence reviews in formats that are more understandable to policymakers and general audiences through visualization, clear language, and digital media; (4) knowledge brokering and other processes that increase direct communication between reviewers and intended policy audiences; and (5) using organizational partnerships and cutting edge online tools to make completed reviews available to inform additional, subsequent policymaking. Particular attention will be paid to the application of these tools to low-resourced or otherwise stressed health care systems and to policy questions related to the social determinants of health that rely on evidence beyond traditional health systems research.

**Significance for the sub-theme area/field building dimension of relevance:** The ability to make evidence-informed policy requires that decision-makers understand relevant bodies of evidence. However, traditional systematic reviews usually require more time than policymakers have, are relatively expensive, can result in products that are difficult for policymakers to use, and often are do not directly answer the policy question. The emerging strategies for synthesizing, translating, and disseminating evidence provide important new tools, particularly for policymaking in resource-constrained environments.

**Target audience:** health systems decision-makers within government or delivery systems, health systems researchers, and translators who bridge the worlds of research and policy.
The Critical Role of Nurses in Leading Frontline Teams for Quality Primary Health Care in Low-Resourced Communities

Co-authors: Fastone Goma, Nellisiwe Luyando Chizuni, Charity Kapende, Marjorie Makukula, Allison Annette Foster, Carolyn Moore, Claire Viadro, Judith Shamian, Stembile Mugore, University Of Zambia School Of Medicine; Zambian Center for Applied Health Research and Development; University of Zambia; IntraHealth International; mPowering Frontline Health Workers; International Council of Nurses

Background: A significant body of literature attests to the importance of community health workers (CHWs) and community engagement in advancing toward universal health coverage (UHC) and the Sustainable Development Goals (SDGs). However, little attention has been paid to the roles of nurses and midwives who manage rural health facilities. Zambia’s Ministry of Health (MOH) collaborated with the University of Zambia (UNZA) and Primary Health Care to Communities (PHC2C)—a partnership formed in 2014 to advance UHC and the SDGs by strengthening support to nurses to effectively lead frontline teams to deliver quality care aligned with community health needs—to understand barriers and facilitators to nurses’ ability to lead quality care.

Methods: Researchers from UNZA and PHC2C member IntraHealth International led a formative assessment through 30 in-depth interviews and 10 focus groups across four provinces with four categories of respondents: neighborhood health committee (NHC) members and volunteers, rural facility staff, provincial and district management, and national decision-makers. Instruments were based on previous research and an initial scoping visit. Data were validated through a stakeholder workshop and triangulated with Zambia’s health information system data, policy documents, and published literature.

Results: Zambia’s community frontline teams are a complex mixture of professional facility staff, a new cadre of community providers, volunteers, and NHCs. Nurses in charge of rural facilities are expected to coordinate team members to deliver quality care through task-sharing, information exchange, and supervision and coaching with a team that often operates beyond their training or legal scope of practice. Nurse managers’ clinical and leadership capacities correlated with client perceptions of quality care and with the competence and commitment of staff and volunteers. Despite these links, job descriptions do not reflect the community nurse manager’s broad responsibilities or provide for step pay increases or career advancement.

Discussion/Conclusions: Community frontline teams require a leader who is capacitated and empowered to coordinate and motivate seamless and sustainable quality services that are accessible to all. Zambia’s community system has the potential to support integrated, responsive quality care and advance toward UHC if nurses are capacitated and recognized to lead frontline teams. Rural facility managers need job descriptions that reflect the responsibilities they assume and training that equips
them for the challenges they face and allows them opportunities for continued advancement. Investing in the leadership, management and clinical competencies of rural facility managers and developing policies that recognize and support them will advance UHC and the SDGs.
Kate Gooding, Malawi-Liverpool-Wellcome Trust, Malawi  
Abstract ID: 814

**What affects community perceptions of responsiveness? Experiences from rural Malawi on the acceptability and relevance of health research**

Co-authors: Kate Gooding, Mackwellings Phiri, Nicola Desmond, Malawi-Liverpool-Wellcome Trust; Malawi-Liverpool-Wellcome Trust, Liverpool School of Tropical Medicine

**Background:** Responsiveness to community priorities and concerns is critical for ethical and effective health research and services. This presentation examines responsiveness in relation to research on child health services, specifically vaccination.

The responsiveness of vaccination research and services can be considered in relation to perceptions of the vaccine, the target disease, and the health system or researchers providing the vaccine. Perceptions of each component can affect community engagement. If the research or services do not uphold the ethical requirement of responsiveness, then engagement and uptake may be limited. Globally, there are concerns about declining public confidence in vaccines, with vaccination rates stagnating or falling in some developing countries. This suggests gaps in the responsiveness of vaccine delivery systems to public concerns. Progress in tackling vaccine-preventable disease requires evidence on factors affecting acceptability and responsiveness.

The Malawi-Liverpool-Wellcome Trust (MLW) is undertaking research to examine the efficacy of an influenza vaccine in children. This trial provides an opportunity to examine community perceptions and build evidence on the responsiveness of both the research and influenza vaccination. We are conducting qualitative research to explore views on the trial and vaccine, including fit with community priorities and understandings of research.

**Methods:** The presentation draws primarily on interviews with households invited to participate in the trial, including those who do and do not enrol their children. To understand broader perceptions of vaccines and influenza, we are conducting critical incident narratives with parents of sick children, and focus groups with health workers, community leaders and parents (including men, women and those who are socially excluded). The research takes place in rural Chikwawa, one of Malawi’s poorest districts.

**Results:** With data collection currently underway, the presentation will report findings from initial analysis. We will share findings on community perceptions of the acceptability and value of influenza vaccination and the trial, including fit with community priorities and the benefits and risks of participation. We will examine key concerns and variations in perceptions between and within communities, to identify factors affecting perceived responsiveness.

**Discussion and conclusion:** Understanding whether research is responsive to community priorities and perspectives can help us design future research and interventions in a way that is both ethical and acceptable. Our findings will inform ongoing and future research at MLW, and feed into design of any future influenza interventions. We hope the findings will provide relevant insights for the responsiveness of health services and research more widely.
Catherine Goodman, LSHTM, United Kingdom  
Abstract ID: 1058

Understanding the nature of competition facing private sector providers of delivery care in Uttar Pradesh, India

Co-authors: Catherine Goodman, Richard Iles, Meenakshi Gautham, Manish Subharwal, Sanjay Gupta, Manish Jain, LSHTM; IMPACT Partners in Social Development

Background: In the face of growing household incomes and rapid urbanisation, private sector facility provision is expanding rapidly in low and middle income countries, leaving governments with stark challenges in terms of how best to respond and engage with this sector when public funds are limited. The inadequacy of traditional regulation has been widely documented, leading to increasing interest in other strategies to improve private sector performance. However, too often these are based on a limited understanding of the financial incentives and constraints the private facilities face. To address this gap, we studied the nature of competition facing private facilities providing delivery care in Uttar Pradesh, which has some of the poorest maternal health indicators in India.

Methods: The study was conducted in 5 contrasting districts: Kanpur Nagar (the largest city in the state), Kanpur Dehat, Kannauj, Bareilly and Rampur. Data collection comprised a census of all healthcare providers, a quantitative survey of 420 private delivery facilities, and 90 in-depth interviews with delivery providers, allied service providers (e.g. diagnostic labs, ambulance providers), and key government and NGO stakeholders. The study conceptual framework drew on a range of concepts from the economics literature in order to understand the nature of price and non-price competition, and cooperation between providers.

Results: The private delivery sector is highly fragmented but intricately organised. It consists of a number of market segments serving different socio-economic groups, with segments defined by staff qualifications, equipment, hotel services and registration status. Private providers are involved in a complex set of networks, which generally involve commission payments, summed up as “everyone pays everyone”. Dealings with other healthcare facilities concern paying commission on patient referrals, and visiting consultants renting hospital facilities. Dealings with allied service providers include paying incentives to ambulance staff or community workers who provide clients, or receiving payments from diagnostic centres or medical stores which are used by the facility’s patients. As one provider said “people compete more on commissions than on quality”.

Discussion: We will explore the potential implications of the findings on market structure and private provider practices for access to and quality of maternal healthcare, and for the design of private sector policies and interventions. In particular, we will consider how various regulatory and supportive strategies may be conflicting or compatible with providers’ incentives, and their feasibility in the context of a highly fragmented market.
Lane Goodman, Results for Development, United States
Abstract ID: 545

Reducing Fragmentation in the Nigerian Health Care System through Growth and Strengthening of Intermediary Models

Co-authors: Tricia Bolender, Jeffrey Arias, Emmanuel Aiyenigba, Results for Development

Background: Prompted by the challenges of fragmented health systems, this research was conducted to examine the role that “intermediary models” may play in effectively organizing mixed (public-private) health systems with a specific focus on Nigeria. Intermediary models may loosely be defined as organizations that mediate and organize the interactions and transactions of small-scale providers as groups, either with patients, governments, or vendors of healthcare products. Across many economic contexts, intermediary models have emerged that provide greater structure in the healthcare system and addressed many of the key challenges caused by fragmentation, namely: Lack of proactive population management and continuity of care; Lack of quality of care that is safe, effective, patient-centered, timely, efficient and equitable; Lack of long term management capacity; and Lack of integration of providers into larger systems for payment.

This research identified intermediary models globally and explored the environment which enabled their growth and success.

Methods: Over 120 intermediary models were identified and scored based on how many challenges caused by fragmentation they attempted to solve, and whether they had scaled or had any evidence of impact. Based on systematic scoring eight intermediary programs were chosen for case studies involving qualitative interviews with program managers, government officials and partners of the program to identify enabling environment factors.

Results: The research identified seven characteristics of an “ideal” intermediary. In many countries, there already exist structures that begin to solve some key problems of fragmentation, such as Health Maintenance Organizations (HMOs), franchises, and professional associations. However, many intermediaries are not fully developed to take on all of the “ideal” functions of intermediaries in a mixed health system. There is opportunity for existing structures in countries to evolve, and to consider the development of new intermediaries. Policy and potential donor approaches to bring this about include: Government can identify priority area or important health gap linked to the challenges of fragmentation, and develop an RFP for a private sector intermediary to apply to. Government or donors can support partnership between a successful intermediary globally, with a local partner. Government or donors can develop an experimental space for testing and learning around better integrating health care and addressing the challenges of mixed market fragmentation. Government can drive public demand for quality – thereby influencing the development of a demand-side intermediary – by developing a system to publicly report quality indicators across public and private facilities.
George Gotsadze, Curatio International Foundation, Georgia
Abstract ID: 2985

The road to sustainability: A framework to assess transition preparedness

Co-authors: Ana B Amaya, George Gotsadze, Ivdity Chikovani, Curatio International Foundation

Fluctuations in aid allocated to health in the last five years together with changes in eligibility of aid of several developing countries due to economic growth has uncovered lack of preparedness of these countries in dealing with the transition out of external funding for health. This is particularly relevant in contexts where there is still weak institutional NGO and civil society capacity to ensure government commitments to addressing diseases such as Tuberculosis and HIV are maintained.

Informed by a review of the literature and the results of a pilot exercise in four middle-income Eastern European countries: Belarus, Bulgaria, Georgia and Ukraine; a conceptual framework and assessment tool for transition preparedness was developed to respond to this issue. The purpose of this tool is to provide information for an adequate transition planning process by identifying strategic and operational issues to assure the sustainability of HIV and TB programmes supported by the Global Fund, one of the largest funding mechanisms for these diseases, or other donors.

This original framework concentrates on programmatic sustainability by focusing on the proven enablers of sustainability organised within the programmatic cycle. Each of these components was operationalized into indicators, which were allocated a score to help identify the overall risk for transition and most importantly, the key areas that needed to be addressed during the transition process. A few indicators were streamlined following the pilot exercise and the tool proved to be effective in uncovering transition preparedness issues within the countries.

Findings elucidated important recommendations for the Global Fund, as well as the countries. Transition preparedness towards a sustainability scenario requires allocated funding and should preferably be evaluated from the start of the grant, considering transition as a gradual process so issues can be tackled effectively and certain programme elements can be transitioned earlier if possible. For the countries themselves, developing strong partnerships and promoting active involvement of all stakeholders in preparing for transition early on can ensure that a long-term commitment to sustainability remains a priority.

The flexibility and at the same time specificity of this framework can support the work of donors by developing tools to evaluate a country’s readiness for transition as well as inform the assistance that recipient countries require to prepare for a sustainable transition scenario in the short, medium or long-term.
Tamar Gotsadze, Curatio International Foundation, Georgia

Abstract ID: 2927

**Progress in reducing health system bottlenecks towards achieving the MDG 4: Evaluation of UNICEF’s contribution in five CEE/CIS countries**

Co-authors: Tamar Gotsadze, Akaki Zoidze, Ivdity Chikovani, George Gotsadze, Curatio International Foundation

Background: The identification of system barriers and bottlenecks and their timely removal or reduction, are pre-requisites for implementing effective public health interventions. The evaluation aimed to document progress in reducing under-5 and infant mortality and morbidity and to generate lessons and inform UNICEF programmes.

Methods: The evaluation was based on UNICEF’s Theory of Change to reduce and close the equity gap in under-5 and infant mortality and morbidity in the CEE/CIS and used both UNICEF’s MoRES framework and the WHO’s essential health system functions approach. Methods used included site visits, in-depth and group interviews in five CEE/CIS countries (Moldova, Kazakhstan, Kyrgyzstan, Serbia and Uzbekistan), desk review and a secondary analysis of quantitative data for the CEE/CIS region.

Results: Reduction of infant and under-5 mortality and morbidity is observed in the CEE/CIS over the period 2000 to 2012, albeit the trends in key child health indicators across geographical, ethnic, gender and other socio-economic stratifiers were uneven. UNICEF-supported programmes were well aligned with national development and sectoral priorities. Programmes invariably addressed the most important causes of infant and under-5 morbidity and mortality and were mostly successful in identifying and applying the right interventions, with the appropriate scope, targets and scale to address these health system bottlenecks. UNICEF most likely made a significant contribution to achieving the required system and community level changes, but results were mixed in the case of reducing the equity gaps and mainstreaming gender equality. Most UNICEF-supported programmes were integrated into national policies and budgets, but were somewhat more successful in assuring programme integration into national policies than into national budgets.

Discussion / Conclusions: UNICEF’s skills and its approach to health system-level changes along with sustained engagement of governments and development partners who contributed substantial financial resources, have been critical factors for success. However, UNICEF was not always successful when addressing health financing and health service delivery system bottlenecks independently or even in cooperation with other development partners who are traditionally active in health reforms, particularly in the lower income countries evaluated where limited government spending on health, low staff motivation and frequent turnover of public health managers negatively affect the health systems capacity to change. Toolkits for health system performance and for strengthening assessments were not consistently applied and/or institutionalised to rigorously monitor system-level changes.
The evaluation recommended to sharpen equity-focus of programming, consider not sufficiently addressed underlying causes of child mortality and morbidity and addressing persisting bottlenecks.
Carolyn Grant, India
Abstract ID: 2373

‘We pledge to improve the health of our entire community’: Improving service delivery at the frontlines through health worker teamwork and motivation

Co-authors: Indrajit Chaudhuri, Carolyn Grant, CARE India; CARE

Background: Health worker effectiveness depends not only on skills and capacities, but also on motivation and commitment to provide quality services. In Bihar, India the frontline health workers (FLWs) provide essential, first-line health services for many of the state’s poorest citizens. Yet, there is a shortfall of motivated and skilled providers. Further, there is a lack of coordination and collaboration between Bihar’s two cadres of FLWs, even though they should be serving the same clients.

To improve the situation, CARE India drew from the business world and developed an innovative approach that aimed to improve FLWs’ effectiveness by strengthening their teamwork and motivation. The intervention, called Team-Based Goals and Incentives (TBGI), had never been tried before in Bihar and included monthly coordination meetings; joint goal setting and tracking; non-financial incentives and public recognition for successful teams; and work with the FLWs’ supervisors to improve their leadership skills. The intervention also aimed to shift the ‘work culture’ and incorporated aspects such as a motivational pledge that the FLWs recited at the start of every meeting.

Methods: A total of 917 FLW and 53 supervisors completed an interviewer-administered questionnaire in 38 intervention and 38 non-intervention health sub-centers in a single district, 30 months after initiation of the intervention. The questionnaire included measures of social cohesion, teamwork attitudes, empowerment, job satisfaction/attachment, as well as teamwork behaviors, equitable service delivery, taking initiative, and leadership. We conducted bivariate analyses to examine impact of the intervention on these psychosocial and behavioral outcomes.

Results: Results show statistically significant differences across several key measures between intervention and non-intervention groups, including improved teamwork (8.8 out of 10 versus 7.3), empowerment (8.6 versus 7.6), and job satisfaction (7.1 versus 6.2). We also found changes in performance - intervention FLWs, conducted more and higher quality joint home visits; and importantly, clients demonstrated improvements in health-related behaviors, such as age-appropriate feeding. Fewer significant differences were found for supervisors, however, intervention supervisors reported a higher sense of teamwork as well (8.4 versus 5.4). Both FLWs and supervisors in the intervention arm said working together made their job easier and interestingly, ranked the public recognition and working together as more motivating than the non-cash incentives.

Conclusions: The TBGI intervention supported improvements in the performance, motivation and integration of FLWs; and offers an innovative approach to other practitioners and governments for improving the health system in a resources constrained setting.
Stefanie Gregorius, LSTM (Liverpool School of Tropical Medicine), United Kingdom
Abstract ID: 1077

**Capacity Strengthening: towards a holistic definition for Global Health to allow for more resilient and responsive programming**

Co-authors: Stefanie Gregorius, Imelda Bates, Laura Dean, Helen Smith, Janet Njelesani, LSTM (Liverpool School of Tropical Medicine)

**Background:** Although the health sector is at the forefront of exploring and developing best practices for capacity strengthening, the term is seldom explicitly defined or conceptualised. Differing definitions and descriptions for capacity strengthening across authors and programmes are barriers to applying findings and comparing progress across different health contexts, and to research. We conducted a systematic review to develop a working definition of capacity strengthening in global health, to determine key themes and to clarify the use of this important concept for scientists, policymakers, and funders.

**Methods:** Empirical and theoretical literature containing a definition and/or description of capacity strengthening in relation to global health was identified through systematic searches of PubMed, Global Health, Scopus and OVID databases using search terms: “capacity strengthening”, OR “capacity development”, OR “capacity building” combined with “global health” OR, “international health” OR, “global public health”, OR “health research” OR, “health development”. Additional search criteria included; papers published between 01/01/2003 and 08/10/2013 and both abstract and full paper were available in English. Data were extracted from articles that met all inclusion criteria to capture information on definitions, descriptions and conceptual frameworks associated with the terms used. Information within the data collection framework was analysed thematically to understand term construction.

**Findings:** The search yielded 44 relevant texts. Most papers highlighted the importance of strengthening capacity at different levels, including individual, institutional, national, environmental and international levels. The importance of context (e.g. socio-cultural, socio-economic) in affecting capacity strengthening activities has increasingly been recognised. Capacity strengthening is often described as a long-term process requiring resources in terms of time, funds and commitment from all stakeholders involved. There is increasing recognition that capacity strengthening activities in global health should be informed by national health needs and priorities to promote research uptake. Capacity strengthening activities should include discussions regarding sustainability to maintain and/or strengthen ‘optimal/benchmark’ capacity at different levels. Unequal power-relationships among stakeholders involved in the capacity strengthening activities can be detrimental to the process.

**Discussion/Conclusions:** Despite a lack of clarity in standardised definitions and descriptions for capacity strengthening in global health, our review highlighted commonalities in conceptual underpinnings. Development of a common definition that incorporates such constructs would likely increase lesson learning and transferability across and within capacity strengthening policy and programming. This
would allow for increased adaptability of capacity strengthening activities, encouraging them to be more responsive and resilient to inter-contextual lesson learning.
Equally unequal? A comparison of measures of health inequality using consumption based vs. asset based measures of health inequality

Co-authors: Karen Ann Grépin, Martin Evans, Mengzi Qian, David Hipgrave, New York University; UNICEF; Colombia University

Background: Measuring progress towards Universal Health Coverage (UHC) (generally defined as all citizens having equal access to health services, regardless of their ability to pay) requires accurate and reliable measures of access to health services by socio-economic status. The standard approach to measure economic status for poverty measurement usually entails the use of consumption-based measures of socio-economic status. However, such measures are not readily available in health-focused household surveys (e.g. the Demographic and Health Surveys (DHS) or Multiple-Indicator Cluster Surveys (MICS)), which instead generally collect data on household ownership of key assets to construct “wealth indices” based on ownership of these assets. Almost all measures of health inequality in low and middle-income countries (LMICs), including those currently being tracked to measure progress towards UHC, rely upon asset-based measures of socio-economic status, but there has been surprisingly little evaluation of this approach in the theoretical or empirical literature.

Methods: Using data from an unusual national household poverty survey in Madagascar in 2014, which collected data on health service utilization, health outcomes, and household assets, in addition to standard household consumption data, we compare health inequalities (outcomes, service utilization, and other measures) measured using both asset-based and consumption-based indicators of socio-economic status.

Results: Our preliminary results (which will be finalized in spring 2016) demonstrate important differences in measures of health inequality depending on the type of poverty measured employed. For example, there is almost no gradient in child mortality across household wealth quintiles measured by asset ownership, but a large gradient when measured using consumption-based measures. We plan to explore which gradients in health service utilization appear to most closely correlate with the observed gradient in health outcomes and other health-related indicators.

Discussion: Measuring progress towards UHC requires good data on household poverty and health expenditure. Current measures of health inequalities are based almost entirely upon ownership of common household assets. In Madagascar, large differences exist in health outcome disparities when measured using consumption-based measures of poverty, but nearly no differences when calculated using wealth index quintiles. We are likely underestimating health inequalities in Madagascar and possibly other countries. More research is urgently needed to understand these differences and to improve methods of monitoring progress towards UHC.
Xiaodong Guan, Peking University, China
Abstract ID: 902

**Drug Price Comparison between China and Six Developed Countries**

Co-authors: Luwen Shi, Xiaodong Guan, Liang Zhao, Peking University

Introduction: High price is an obstacle to drug accessibility. China, as a developing and transitional country, has made much effort to decrease the drug price. However, it is still commonly perceived that drugs are more expensive in China. Little research has been done to quantify this difference. The objective of the study was to compare drug price between China and six developed countries (Britain, Germany, France, Canada, Australia and Japan), and to find out current position of China’s drug price in the world.

Methods: In total, 150 kinds of drugs in the procurement list of Guangdong in 2009 were selected to be the sample based on their general name. The market share of the selected drugs was 95% for sales. Laspeyres index was applied to compare drug price, which was converted through exchange rate. The comparisons were conducted at overall sample level, brand-name drug level, original drug level and generic drug level. For therapeutic class comparison, China’s drug price was compared with mean price of the six countries.

Results: For overall sample, price index in oral form was higher than Britain (0.80). For brand-name drugs, price index in both overall and oral form was higher than Canada (0.79; 0.78) and Australia (0.50; 0.50); price index in injection form was higher than Japan (0.93). For original drugs, price index in both overall and oral form was higher than Canada (0.93; 0.45). For generic drugs, price index of drugs ranked the last. Of the 18 therapeutic classes included, only the price of hematologic drugs in China is higher than the international level. For brand-name drugs, China’s drug price in three therapeutic classes (circulatory system, endocrine system and mental disorder) was higher than the international average level.

Conclusion: All the six reference countries are developed countries due to data availability, which might explain why drug price in China are lower in most comparison subgroups. If the price was converted through purchasing power parity, the price index was in the middle level. Especially, the price index of brand-name drugs in oral form was the highest. Also, there is salient disparity in price between brand-name and generic drugs. All these factors contribute to rather poor medicine accessibility in China.
Monitoring Effective Coverage to Improve Heath System Delivery of Key Interventions

Co-authors: Deborah Sitrin, Tanya Guenther, Lyndsey Wilson-Williams, Kondwani Chavula, Sujan Karki, Bereket Mathewos, Lara M. E. Vaz, Save the Children - US; Save the Children International

Problem: Monitoring the “effective coverage” of key health services – coverage of quality services among people who need them – is not frequently done for key interventions. Instead, there is reliance on measuring contact with the health system (such as the number of antenatal visits), with no information on the content or quality of those visits. Even when the number of individuals receiving treatment or other services is collected, appropriate denominators capturing the population in need of services are often not collected or used, so effective coverage cannot be calculated. Population surveys can be used to measure effective coverage of some key services, but occur infrequently, are costly, and may not be large enough to capture services targeting small sub-populations (such as low birthweight newborns); furthermore, individuals may not be able to accurately report on services received. Also, there is often little data collected or reviewed on potential bottlenecks that impact program performance or strength of implementation. As a result, program implementation often proceeds relatively blind to program performance and its drivers.

Purpose: Save the Children’s Saving Newborn Lives program is using a monitoring approach for key newborn interventions that seeks to make program performance and its determinants more transparent to managers. The approach is guided by a framework that emphasizes tracking “effective coverage” and “implementation strength” for better informed decision making. This concept builds on work by Johns Hopkins University and London School of Hygiene and Tropical Medicine, among others. It is different in that it relies as much as possible on routine data, so that it can be used for continuous management and program improvement, instead of evaluating programs at a single time point. The effort aims to improve data use for decision-making at multiple levels of the health system.

Methods: The conceptual framework will be presented. The approach to designing monitoring strategies will be described, illustrated by specific examples from Malawi, Ethiopia, and Nepal. The presentation will explain how concepts are operationalized for each example, present data for the effective coverage and implementation strength of services for newborns in the three countries, and describe how the data are being used to improve coverage.

Significance for the sub-theme area/field-building dimension: SNL is contributing a new approach to rigorous, real-time monitoring of meaningful measures of program performance. Measurement of drivers or determinants of coverage is being fed back to program managers, helping to direct their efforts in improving performance.
Ramon Lorenzo Luis Guinto, University of the Philippines Manila, Philippines
Abstract ID: 3401

Examining subnational health systems in fragile settings: challenges and opportunities in the Autonomous Region of Muslim Mindanao in the Philippines

Co-authors: Ramon Lorenzo Luis Rosa Guinto, TJ Robinson Moncata, Cyrus Esguerra, Fely Marilyn Lorenzo, University of the Philippines Manila

Background: The Autonomous Region of Muslim Mindanao (ARMM) has for many years been facing important transitions. Home to predominantly Muslim population, ARMM was given greater control over social, political, cultural, and economic affairs as compared to the country’s 17 other regions. While recent negotiations have been attempted to achieve durable peace, ARMM remains to be the battleground of decades-long conflict between national government and Muslim secessionist groups. In terms of health, in contrast to the rest of the country, ARMM’s local health units report to provincial and regional levels, thus retaining the centralized model of the Philippine health system prior to the 1991 devolution. Currently, several provinces in ARMM demonstrate the poorest health and other socioeconomic outcomes. Because of harsh realities, little research on ARMM’s health situation has been conducted, making this study one of the first to comprehensively examine its fragile health system.

Methods: An enhanced version of the WHO health systems framework, which incorporates concepts such as social determinants and demand-side factors, was developed as framework of analysis. A multiple case study approach was utilized for analyzing ARMM’s three levels – regional, provincial, and municipal. Two provinces were purposively selected, and from each province, two municipalities were identified as cases – a low and high performer, based on the latest results of the Philippine Local Government Unit (LGU) Scorecard. A mixed-methods approach was employed, which included document and literature reviews, quantitative data analysis, and key informant interviews. Results for the individual cases were first collated by a junior researcher, later scrutinized by the research team. This was followed by a cross-case analysis for identifying common themes.

Results, discussion, conclusions: Even though good practices exist in certain municipalities, ARMM’s health system is generally marked by chronic underfunding, gross shortage of health workers, fragmented health information system, and limited range of health services, medicines and technologies. While health officials are hopeful that the centralized set-up of the health system can be further strengthened, governance is controlled by select influential clans that characterize Islamic society in ARMM. Unstable security situation, lack of literacy, unemployment, and limited road access are some of the major barriers identified to impede healthcare access. Overall, ARMM’s perennial health problems are rooted in its underlying social, political, and economic challenges. A whole-of-society approach is necessary to address the social determinants, such as lack of peace and order, that exacerbate existing health inequities in the region.
Sara Gullo, CARE USA, United States
Abstract ID: 842

Raising the score: Improving the responsiveness and accountability of Malawi’s health system with CARE’s Community Score Card ©

Co-authors: Christine Galavotti, Sara Gullo, Anne Sebert Kuhlmann, Phil Hastings, Nate Marti, CARE USA; Saint Louis University; Far Harbor LLC

Background: Social accountability approaches have been touted as a way to improve reproductive health outcomes in low-resource settings by empowering communities to hold health systems accountable for delivering quality and equitable services. CARE’s Community Score Card © (CSC), invented in Malawi, is a social accountability approach that brings together community members, health service providers, and officials to identify barriers, unlock resources and implement solutions to make sustainable, lasting, community-driven changes in health outcomes. We conducted a cluster-randomized trial in Ntcheu district, Malawi to evaluate the CSC’s impact on maternal health and service coverage outcomes.

Methods: We matched ten pairs of health facilities, randomly assigning one of each pair to intervention and control arms. We then conducted independent cross-sectional surveys of women who had given birth in the last 12 months and of health workers at baseline and at two years post-baseline.

Intervention effects were estimated using difference-in-differences (DiD) and local average treatment effects (LATE). Results: From the women’s surveys (baseline n=1301 and endline n=1300), DiD estimates indicated a 20% greater difference in the CSC intervention areas in home visits by a CHW during most recent pregnancy (p < .01), a 6% greater difference in those receiving a postnatal visit (p = .01), and a 16% greater difference in service satisfaction (p < .001). LATE estimates indicated a greater number of home visits during pregnancy by CHWs (B = 1.14, P < .001) and greater current use of modern family planning (B = 0.57, P < .01) in intervention than control areas. Parallel findings from DiD analyses of the health workers’ surveys (baseline n= 280 and endline n= 412) indicated a 15% greater difference in the number of health workers reporting responsibility for family planning counseling (p < .05), 19% for provision of family planning methods (p = .01), and a greater difference in actual number of women counselled about family planning during the past month (p < .05). Intervention areas also reported a 20% greater difference in responsibility for tracking pregnant and post-partum women (p < .01).

Discussion/Conclusion: Our results suggest that engaging community members and health workers together through the CSC, an approach created and refined in the Global South, has built trust, strengthened relationships, and improved health and service coverage outcomes, thereby enhancing patient-center dimensions of quality of care and improving the responsiveness of Ntcheu’s health system to the priorities and needs of the population it seeks to serve.
Jaya Gupta, Johns Hopkins Bloomberg School of Public Health, Jaya Gupta  
Abstract ID: 2443

Assessing the effect of nurse mentoring and training on worker motivation in Bihar, India

Co-authors: Jaya Gupta, Aarushi Bhatnagar, Kaveri Mayra, Krishna Rao, Johns Hopkins Bloomberg School of Public Health; Oxford Policy Management

Purpose: This study aims to assess the effect of nurse mentorship and training on nurse motivation in Bihar, India. Quantitative methods will be used to analyze how nurse motivation differs in mentored versus non-mentored settings post implementation of a mobile nurse mentoring and training (MNMT) intervention.

Focus/content: The effect of MNMT on nurse motivation will be evaluated by comparing nurses at primary health centers (PHCs) which received mentoring with matched PHCs that did not receive mentoring. A self-administered questionnaire (SAQ) using a four-point Likert scale will be administered with nurses in mentored PHCs (N=330) and non-mentored PHCs (N=165). PHCs in each group will be matched using propensity score matching.

The SAQ draws from social determination theory (SDT) and the continuum of motivation to guide questions asked (Gagné & Deci, 2005). The outcome of interest, mean motivation, will be compared between the mentored and non-mentored PHCs. Regression analysis will assess associations between respondent characteristics and the outcome of interest.

Significance for the sub-theme area/ field-building dimension of relevance: In line with the subtheme, this study looks at how organizational culture can promote improved system performance. Many human resource management tools focus on improving worker motivation. One such tool is training and professional development. A study in Kenya and Benin, found that training and supervision and access to materials increased willingness to perform (Mathauer & Imhoff, 2006).

Training/mentorship can help health workers cope better with the demands of their job, to take on more challenging duties, and to work towards achieving personal goals of advancement. The aforementioned study found that health workers receiving training courses over the last two years felt more comfortable and confident in their work. Twenty percent mentioned an increase in interest and commitment to work. (Mathauer & Imhoff, 2006) Health worker motivation has been linked with health sector performance and quality of care (Franco, Bennett, & Kanfer, 2002). Shortages of health workers continue to threaten provision of care across rural India (Rao et al. 2012), and improved motivation may reduce attrition rates in undesirable posts. This study will additionally look at the role of mentorship, or providing supportive supervision and coaching. This will be a novel contribution to the literature as mentorship is an under-studied area of health worker motivation.

Target audience:
Both policymakers and funding agencies interested in investing in strengthening human resources for health and quality of care may be interested in this research.
Rajendra Gurung, Nepal Health Sector Support Program, Nepal  
Abstract ID: 3100

**Expanding availability of FP services in rural Nepal through comprehensive FP events (VSC+)**

Co-authors: Yuba Raj Paudel, Rajendra Gurung, Maureen Dariang, Nepal Health Sector Support Program

Background: Provision of FP services, especially mobile permanent FP camps (VSC camps) has been one of the pillars of Nepal family planning programme since its beginning. However, the services traditionally provided through mobile camps (VSC and Long term FP satellite clinics) do not promote choice as most camps offer only one or two methods at one site, and provide a one-off service in winter season.

The purpose of the research was to investigate whether provision of comprehensive FP mobile services (VSC, LARCs, counselling, information) at selected rural health facilities at a regular frequency expands availability, choice and uptake of family planning services in rural Nepal.

Methods: An operational research study was conducted in two remote districts (Baitadi and Darchula) located in Far-west Nepal. The study trialed integration of LARCs and contraceptive counselling services through existing VSC camps (i.e. to expand the range of services options provided through VSC camps). A team of doctors, nurses and ANMs provided these comprehensive mobile services at the strategically selected locations at regular intervals promoting availability of a broader range of family planning services and thus more choice for the clients. The intervention was carried out from August to December 2015 (warm season).

Results: From August to December, altogether 12 camps were conducted in 4 sites of Baitadi district and 16 camps were conducted in 4 sites of Darchula district. Of approximately 323 registered clients from both districts, n=133 (41%) used minilap, n=100 (31%) used implants and n= 70(22%) used Non-scalpel Vasectomy (NSV). Similarly, proportion of clients using depo, IUCD and pills were 3%, 2% and 1%, respectively. Findings indicate that if VSC+ camps are conducted throughout the year in health facilities, clients use the services not only in winter but also during warm/summer season. Local health workers also got opportunity to build capacity through exposure to skills of more experienced staff, and the opportunity to perform high volumes of specialised procedures in a short period of time.

Conclusion: A broad choice of FP methods in mobile camps at regular intervals throughout the year seems to be a better strategy to ensure informed choice and quality FP services in rural settings. The most preferred method in rural settings was minilap followed by implants and NSV. Onsite coaching to local service providers by mobile camp team contributed to health system strengthening.
Savitri Gurung, The Australian National University, Australia
Abstract ID: 2330

The Experience of Free Health Care Policy Implementation in Nepal

Co-authors: Savitri Gurung, Sharon Friel, The Australian National University

Background: Since the 2000’s developing countries have embarked on reducing health inequities by adopting removal of user fees to address financial health care access barriers. Limited but growing studies show that there is a gap between policy intentions, impact and outcomes. Despite widespread recognition of this challenge, there is limited conceptual and empirical research to understand and adequately explain how and why this implementation gap exists. Hence a framework is developed and applied to conceptualising the drivers and barriers to policy implementation processes and outcomes by adapting Institutional Analysis and Development framework (Ostrom, 2010) with the constructs of Structuration Theory (Giddens, 1984; Stones 2005) and Diffusion of Innovation theory (Rogers, 2003).

Methods: Using the case-study of Free Health Care (FHC) policy implementation in Nepal, the study uses a theory driven framework to examine how and why the key FHC policy actors at multiple level of governance- national, sub-national (district) and local (community) understand, interact and implement FHC policy within the institutional contexts of public health system generating combinations of mechanisms and intended and non-intended policy outcomes. Data is collected from nine primary health care facilities in three districts of Nepal. Case data includes measures of free health care use, facility documents, participant observations of facility functions and semi-structured interviews (n=89) with key policy actors, including government officials (health and non-health), health service providers, international agencies, FHC service users and non-users.

Results (Preliminary): Comparisons between the health facilities and districts implementing the policy under the same rules but different community attributes indicate differences in implementation processes and outcomes. Overall the policy did generate enthusiasm, expectations and confusion about health care demand and delivery among different actors. The findings indicate health officials’ divergent practices from the expected norms of FHC policy including differences in “systems in meaning” of FHC. For most of the frontline health workers the “equity” agenda of FHC conflicted with past institutional practices of user-fee collection and health system constraints of timely resource supply and management triggering cynicism. Though self-interest drives implementation barriers, better performing health facilities show the potential of responsive and collective capacity of health officials and community members in mobilizing opportunities through both formal and informal networks for delivering FHC.

Implications: A better understanding of the determinants of policy implementation will help both policymakers and implementers in developing countries with similar issues of implementation challenges to map context specific strategies that facilitate policy implementation.
Rajendra Gurung, Nepal Health Sector Support Program, Nepal  
Abstract ID: 2298  

Expanding access to Long Acting Reversible contraceptives through visiting providers (VPs) in rural Nepal  

Co-authors: Rajendra Gurung, Yuba Raj Paudel, Maureen Dariang, Stuart King, Nepal Health Sector Support Program  

Background: Among currently married women of Nepal, IUCDs and implants represented just 0.7% and 0.8% of the contraceptive method mix respectively in 2006, and 1.3% and 1.2% respectively in 2011. There are very few service providers in Nepal’s public health system who are able to provide long acting reversible contraceptives (LARCs) and those that are trained lack confidence due to limited practical experience during basic training. This study investigated whether mobilization of visiting providers (VP) (i.e. auxiliary nurse midwives or nurses with IUCD/implants skills and experience as well as coaching and mentoring skills) to provide onsite coaching to service providers at birthing centres (BCs) enhanced skills on LARCs, and if direct service provision in non-birthing centre facilities expanded availability and uptake of LARC services in rural Nepal.  

Method/Approach: An operational research study was conducted in one rural district of Nepal, Ramechhap. Three VPs provided coaching to 16 service providers from birthing centres and direct provision of LARCs in 31 Health Posts with no birthing centres. The intervention also included a training component to increase the number of trained human resources at village level birthing centres. HMIS data (pre and post intervention) and data from project report were used to assess effectiveness of the intervention.  

Results: Of 21 BCs, the number providing LARCs increased from 8 at baseline to 18 by the end of the intervention. After 6 months of implementation, District HMIS data showed that CPR increased by 1%. Similarly, new acceptors of LARCs increased by 180% compared to previous year reflecting increasing acceptance of LARCs among women. Many users were from disadvantaged and marginalized groups with disproportionately large uptake of services compared to population e.g. 14% LARC users in the district are Dalits compared to 10% district Dalit population.  

A total of 16 IUCD trained service providers were coached in their workplace during the intervention period. They provided a total of 71 IUCDs after receiving coaching (Average 4.4 IUCD per provider compared to no service before coaching). Qualitative findings indicated that service providers were able to confidently provide LARCs after receiving onsite coaching.  

Conclusion: LARCs availability and utilization can be increased by mobilizing dedicated FP service providers such as VPs in rural districts of Nepal. Regular skill enhancement through onsite coaching enhances competency of local service providers contributing to health system strengthening.
Equity in long lasting insecticidal nets and indoor residual spraying for malaria prevention in a rural South Central Ethiopia.

Co-authors: Alemayehu Desalegne Hailu, Bernt Lindtjørn, Wakgari Deressa, Taye Gari, Eskindir Loha, Bjarne Robberstad, Addis Ababa University, School of Public Health; Center for International Health, University of Bergen, Bergen, Norway; Department of Public and Environmental Health, Hawassa University

Background: While recognizing the recent achievement in the global fight against malaria, the disease remains a grand challenge to health systems in low income countries. Beyond widespread consensuses about prioritizing malaria prevention, little is known about the prevailing distribution of long lasting insecticidal nets (LLINs) and indoor residual spraying (IRS) across different levels of wealth strata. The aim of this study was to evaluate the socioeconomic related dimension of inequalities in malaria prevention interventions.

Methods: We conduct this study in July-August 2014 in Adami Tullu district in the South-central Ethiopia, among 6,069 households. A cross-sectional data were collected on household characteristics, LLIN ownership and IRS coverage. We used principal component analysis technique for ranking households based on socioeconomic position. The inequality was measured using concentration indices and concentration curve. Decomposition method was employed in order to quantify the percentage contribution of each socioeconomic related variable on the overall inequality.

Results: We found that the proportion of households with at least one LLIN was 11.6% and IRS coverage was 72.5%. The Erreygers normalised concentration index was 0.0627 for LLIN and -0.03834 for IRS. The main causes of inequality in LLIN ownership were difference in housing situation, household size and access to mass-media and telecommunication service.

Conclusion: Coverage of LLIN was low and distributed pro-rich, whereas houses were sprayed equitably. Sole emphasis on the mass distribution of LLIN is not sufficient to ensure neither the ownership nor the equity. A priority should be given to the poor in both scale-up and replacement distribution.
Integrating Cardiovascular Diseases, Hypertension, and Diabetes with HIV Services: a systematic review

Co-authors: Helena Legido-Quigley, Victoria Haldane, Laura Otero-García, Louise Sigfrid, Nicola Watt, Dina Balabanova, Will Maimaris, Suan Ee Ong, Fiona Leh Hoon Chuah, Francisco Cervero, Kent Buse, Sue Hogarth, Peter Piot, Martin McKee, Pablo Perel, Saw Swee Hock School of Public Health, National University of Singapore; Universidad Autónoma de Madrid; Centre for Tropical Medicine and Global Health, Nuffield Dept. of Medicine, University of Oxford; London School of Hygiene & Tropical Medicine; UNAIDS

Background: Health services for NCD’s, including cardiovascular diseases, hypertension and diabetes, together with HIV infection, require health systems that address chronic care needs. These needs present an opportunity to coordinate efforts and the resultant synergies can strengthen health systems. However, little is known about current integrations involving these NCDs and HIV. To address this gap, we systematically reviewed the literature examining programs or services integrating Diabetes, Hypertension or CVDs with HIV.

Methods: To meet inclusion criteria, the study had to integrate Diabetes, Hypertension or CVDs with HIV at service delivery level. The list of chronic diseases included Coronary Heart Diseases, Chronic Cardiovascular Diseases, Cerebrovascular Diseases, Hypertension and Diabetes Mellitus Type 2. Global Health, Medline and Embase were searched until October 2015 including six additional sources. Key words (MeSH terms) and free text terms were developed for: HIV, integration and chronic diseases and then combined in the search strategy. Two reviewers independently reviewed the article list, extracted data and assessed for risk of bias.

Results: 11,057 records were identified and 7,616 articles were screened for inclusion. 12 papers representing 14 integration interventions met inclusion criteria.

We identified 5 integration models - HIV with Diabetes, HIV with Hypertension, HIV with Diabetes and Hypertension, HIV into CVD screening and HIV with Diabetes, Hypertension and CVDs. These mainly occur at micro or meso levels, with macro level described only occasionally.

Service type provided differs depending on whether the integration occurs in higher income versus lower income country; whether services are provided in clinical settings vs community campaigns; and whether treatment is provided for both or several conditions, or if screening and referral is the preferred option. The intersection of condition prevalence and existent facilities also influences which model is introduced.

Cohort studies in high income countries suggest that diabetes integrations are feasible and could be facilitated with clinical pharmacists and a multidisciplinary approach. Rapid assessments in low income countries show that expansion can leverage on existent HIV programs or to integrate CVD screening into an HIV clinic. Others discuss how community interventions can be feasible.

Conclusion: Several innovative initiatives have been suggested for integrating HIV with CVDs, hypertension and diabetes. Most proposed models depend on specific settings and disease burden, along with existent structures, with activities occurring at micro or meso levels. Successful integration relies on healthcare professionals and the community. Further evidence on the merits of different integration models is needed.
Strengthening monitoring and accountability to address gaps in primary care system functioning in Punjab, Pakistan

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Background:

Punjab is the largest province in Pakistan, with a population of almost 100 million people served through a network of primary care clinics, including almost 2,500 Basic Health Units (BHUs). The functioning of BHUs in Punjab has historically been low. Significant gaps in key inputs included high staff absenteeism and low availability of essential medicines. In early 2014, an initiative called the Chief Minister’s Health Reforms Roadmap was launched to improve the functioning of primary care facilities. The Roadmap focused on four areas to address gaps in inputs: Engaging political leadership through periodic stocktake meetings to increase accountability; strengthening accountability of district managers through monthly meetings with the Secretary Health; launching a team of independent monitors to undertake unannounced monthly inspections of facilities; and addressing targeted obstacles such as low district medicines budgeting through additional government funding. Targets were set to improve key inputs by provincial political leadership.

Methods: Progress towards targets was measured via periodic monitoring visits. From December 2014, independent monitors undertook unannounced inspection visits to BHUs on a monthly basis. Inspection visits focused on recording availability of basic inputs. Areas of initial focus included clinical staff presence and medicines availability. Data was collected via a 3G-enabled tablet. Simple reports are then generated on a fortnightly basis and sent to district health managers; reviewed on a monthly basis with the provincial Secretary Health and on a quarterly basis with provincial political leadership.

Results: Indicators improved rapidly after launch of the monitoring system coupled with increased accountability, with unauthorized absence amongst medical officers in BHUs in the province decreasing from 12-3% within 9 months; and the availability for 18 critical medicines increasing from 64-96% within 6 months. Results were measured through monthly monitoring data and validated through a third party assessment.

Discussion / conclusions: Robust, reliable data coupled with strengthened accountability systems are a powerful tool for improving health system inputs. Data reports need to be formulated in a way that managers can understand and feel accountable in order to increase managerial oversight. Addressing gaps in inputs can help provide the political momentum needed for more complex reform efforts such as those addressing quality of care.
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Abstract ID: 2344

Model Study of County Clinicians’ Diagnosis and Treatment Behaviors – Based on the Theory of Planned Behavior

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Objectives: Based on the Theory of Planned Behavior (TPB), this study analyzed the influence of behavior attitude, subjective norm and perceived behavior control on clinicians’ decision-making behaviors through simulation ordering a CT scan on patients by clinician decisions at county-level hospitals, and examined significant factors of clinicians’ decision-making behaviors.

Methods: Using the method of purposive sampling, we chose clinicians from county-level hospitals at Jiangsu Province, Chongqing Province and Shanxi Province to carry out the TPB survey. We used sample t-test, ANOVA and structural equation model (SEM) to analyses the factors that influence clinicians’ decision-making behavior.

Results: Among a total of 504 questionnaires, 416 valid ones were collected and the effectiveness rate is 82.54%. The values of model fitting index were x2/df < 3, RMSEA < 0.05, RMSEA = 0.0001, GFI = 0.999, AGFI = 0.987. Behavior attitudes (BA) of the TPB constructs had the largest direct positive and significant influence on behavior (standardized path coefficient = 0.155, p < 0.05). Subjective norm (SN) had a direct negative and significant influence on behavior (standardized path coefficient = -0.164, p < 0.05). Perceived behavior control (PBC) also had a direct positive influence on behavior (standardized path coefficient = 0.072, p = 0.028). Behavior intention has mesomeric effect and direct influence for the prediction of clinicians’ decision-making behavior, the total effect of BI for B was 0.468.

Conclusion: In this study, we found that clinicians’ decision-making behavior was influenced by BA, SN and PBC. BA and PBC of the TPB constructs had direct positive influence on behavior. They remind us that the driven by interests, the lack of medical ethics, and the less influence of peers may cause the deviation of clinicians’ decision-making behavior. In the contrary, SN had a direct negative influence on behavior, meaning if we further improve relevant system requirements, in this constraint, clinicians’ decision-making behavior will become more reasonable.

Acknowledgment: This article was funded by the programme of the Future Health Systems Research Consortium Programme (FHS-RPC). And we thanked the whole China research team for conducting and completing the survey. We also thanked Dr. Chonghui Fu who afforded so many help for the AMOS model construct.
Karen Hardee, The Evidence Project/Population Council, United States
Abstract ID: 1377

Development and validation of an index to assess a rights-based approach to family planning programs

Co-authors: Kelsey Wright, Vicky Boydell, Karen Hardee, The Evidence Project/Population Council; The Evidence Project/International Planned Parenthood Federation

Background: In the face of global commitments to increase access to family planning (FP) services for women and families, there has been an increasing interest in providing rights-based family planning services and programs to ensure high quality, voluntary services for FP clients. In order to address the need for indicators and tools for RBFP, the Evidence Project has partnered with the International Planned Parenthood Federation’s Sustainable Network Project (SIFPO/IPPF) and with colleagues at Reproductive Health Uganda (RHU) to develop and validate the Rights-Based Family Planning (RBFP) Service Delivery Index in Uganda.

Methods: The study seeks to use pre-existing and new metrics to identify areas where there are potential rights vulnerabilities at the health facility level that can be addressed through technical assistance. In Uganda, the Evidence Project is carrying out the study, while other partners will be implementing interventions to address the rights issues raised through use of the RBFP Service Delivery Index. The 24-month, mixed-method study has two phases. The first phase consists of the validation of a set of four instruments implemented in eight facilities to distill core components into the RBFP Service Delivery Index.

The second phase will use the RBFP Service Delivery Index to implement a stepped wedge facility-based study to measure the degree to which individual facilities are implementing a RBFP approach to service delivery, and to examine the utility of the RBFP Service Delivery Index in measuring improvements in programs and in family planning outcomes.

Expected Results: Multiple analytic methods will be used to determine the content validity of the RBFP Service Delivery Index, including factor analysis, principal components analysis and/or cluster analysis. During the validation process, all of the questions (overall and by instrument) related to each of 11 rights/principle and to each of 29 indicators will be examined to assess how they group together. For example, all of the questions that have been mapped to the right “Availability” will be analyzed together. Through this process, key questions that get at each right/principle or indicator will be identified, allowing a reduction of the RBFP Service Delivery Level Index instruments to key, validated components that can be more easily used for program monitoring purposes.

In the long term, the full RBFP Service Delivery Index may be able to be modified to provide the basis for a feasible and acceptable self-assessment methodology and RBFP monitoring tool for facilities.
Joseph Harris, Boston University, United States
Abstract ID: 1357

“Professional Movements” and the Expansion of Access to Healthcare in Thailand, Brazil, and South Africa

Co-authors: Joseph Harris, Boston University

Social science explanations for the expansion of social policy have frequently centered on the importance of left-wing political parties and labor unions. Yet, in the industrializing world, labor unions frequently oppose universalistic reforms that threaten to erode members’ existing benefits, and sweeping changes have often come about during the tenure of political administrations that cannot be characterized as leftist. Scholars have acknowledged that major health reforms tend not to be the product of heads of state or political parties and have instead pointed to the surprising role played by bureaucrats within the state. But just who these influential actors are and why and how the state plays such an important role in their work remains undertheorized. This paper uses the cases of Thailand, Brazil, and South Africa to explore the role that “professional movements” – social movements composed of elites from esteemed professions – have played in the development of universal healthcare programs in the industrializing world. The presentation will explore how physician knowledge, networks, and access to state offices separate them from ordinary citizens and provide them with unique resources that provide them with advantages over even the most powerful and entrenched professional associations. However, the contrasting cases reveal how the relative success of professional movements in Thailand and Brazil and failure in South Africa (where universal coverage exists in name only) hinges on critical differences in the character of democratic transition. I conclude the presentation by pointing to the existence of professional movements in other critical policy domains outside the field of healthcare.
Reviewing the global evidence: What are the impacts of HSS on health?

Co-authors: Laurel E Hatt, Benjamin Johns, Megan Meline, Catherine Connor, Joseph Naimoli, Abt Associates Inc., Health Finance & Governance Project; U.S. Agency for International Development

Background: Facing resource constraints, health policymakers need robust evidence to make the case for investing in health system strengthening (HSS) initiatives. While tragedies like the Ebola outbreak in West Africa have highlighted the human costs of weak health systems and the need for greater systems resilience, evidence for how to most effectively strengthen health systems has remained surprisingly weak and scattered.

Methods: The USAID-funded Health Finance and Governance (HFG) project conducted a review of published systematic literature reviews that assessed the effects of HSS interventions on health status and related health system outcomes (service utilization, quality service provision, uptake of healthy behaviors, and financial protection) in low- and middle-income countries (LMICs). An inclusive definition of HSS interventions was used. The comprehensive McMaster University Health Systems Evidence online database was the primary source of systematic review articles. Sixty-six systematic reviews covering more than 1,500 individual peer-reviewed studies met the inclusion criteria for analysis. Ten researchers with expertise in core HSS topics analyzed and extracted key information from the studies using an Excel-based data extraction template.

Results: The researchers identified 13 types of health systems strengthening interventions with measured effects on health status, service utilization, quality service provision, uptake of healthy behaviors, and/or financial protection in LMICs. HSS interventions including accountability and engagement initiatives among communities and providers; conditional cash transfers; health insurance; training initiatives to improve service quality; service integration; and efforts to bring health services closer to communities have been shown to reduce mortality. Contracting out service provision; performance-based financing initiatives; voucher programs; and task sharing also were found to reduce morbidity. Pharmaceutical systems strengthening initiatives, m-health and e-health interventions, and user fee exemptions had positive effects on proxy health system outcome measures.

Discussion/conclusions: The results from this review demonstrate there is substantial, currently available quantitative evidence linking HSS interventions with health impacts and health system outcomes. Innovations and reforms in how and where health services are delivered, how they are organized and financed, and who delivers them can improve the health of populations in LMICs. However, this synthesis also highlighted the particular challenges health systems researchers face in generating evidence of impacts on health status, such as: (i) the uneven quality of the literature; (ii) the inherent complexity of evaluating systems-level interventions; (iii) variations in the interventions and
their outcome measures; and (iv) dependence of intervention design and success on the particular context.
Samsom Haumba, University Research Co., LLC, Swaziland
Abstract ID: 774

In-service Training service coordination improvement to increase resilience, effectiveness and sustainability in Swaziland

Co-authors: Samsom Malwa Haumba, Hugben Byarugaba, Janet Ongole, Grace Masuku, University Research Co., LLC; PEPFAR/ USAID

Purpose: The changing disease burden and push for greater coverage of health services in low- and middle-income countries has strained existing health worker deficits, increased demands placed on the existing workforce and spurred amplified efforts to build their competencies. Scaling up health services requires significant in-service training investments to build the capability of health workers to provide quality health services competently, safely and efficiently. A number of countries are addressing this need, including the Swaziland Ministry of Health, but documented challenges such service interruption, poor training planning, lack of training monitoring capabilities, and duplication of trainings have raised questions of the effectiveness, efficiency, and sustainability of training investments globally.

Focus: In Swaziland, IST has contributed greatly to the enhancement of knowledge and skills of the health workforce to manage HIV and Tuberculosis epidemics, but has been faced with immense challenges. The lack of an effective IST coordination mechanism (i.e., national, regional and facility level structures and processes with clearly defined roles for aligning IST to needs, planning, monitoring, and coordinating training) manifested in training that was duplicative, unplanned, and at times, disruptive to services, but evidence-based solutions do not exist. As such, we highlight experiences of the development of in-service training coordination mechanisms to build a body of experience, expertise, evidence, and opportunities for shared learning to catalyze future efforts. An IST coordination mechanism was developed and piloted for six months (January–June 2015) among three national programs that focus mostly on high-volume training on HIV, TB, SRHU and encompassed a procedure for developing a training calendar for all MOH training providers, standard operating procedures for approval of national and regional level trainings and a system for tracking trainees and trainings, development of a monitoring and evaluation framework to help monitor and report on IST coordination with outcomes and national level indicators for improved IST coordination (i.e., reducing disruption of service delivery, and duplication of training and improved tracking of training), development of national IST standards to guide the planning, design, coordination, delivery, follow-up, and evaluation of IST and development of an electronic training data base.

Significance: IST continues to form the mainstay of human resources development assistance provided to health facilities and learning show that IST can be improved to ensure sustainability, effectiveness, and efficiency and improvements in training coordination result in more competent workers and better healthcare.

Target audience
Training institutions, MOH managers, Health Service providers
Alice Hazemba, University of Zambia, School of Medicine, Zambia
Abstract ID: 54

HIV and infant feeding: an exploratory analysis of experiences with exclusive breastfeeding among HIV-positive mothers in Lusaka, Zambia

Co-authors: Alice Ngoma Hazemba, Busisiwe Purity Ncama, University of Zambia, School of Medicine; University of KwaZulu Natal, School of Nursing and Public Health

Background: Infant feeding and HIV remains a global public health challenge despite advances in biomedical research. Breastfeeding, especially early initiation and exclusive breastfeeding (EBF) in the first six months of the infant’s life, offers protection from postnatal HIV infection. However, EBF remains low in resource-poor settings despite considerable coverage of services for prevention of mother-to-child transmission (PMTCT). We asked HIV-positive mothers to share their experience with EBF for their HIV-exposed infants.

Methods: A health facility and community-based qualitative study was conducted among 30 HIV-positive mothers practising EBF. These were interviewed at 6 days, 6 weeks, 12 weeks and 18 weeks after giving birth. The field work was conducted at two selected health facilities from January to September, 2014. Interviews were tape recorded, transcribed verbatim and files imported into QRS NVivo 10 version for coding and analysis. Four major themes that highlighted the experiences with EBF emerged: how participants described mother-to-child transmission (MTCT) of HIV through breast milk; how mothers understood the benefits of EBF; how participants recounted their infant feeding experience in relation to PMTCT; and challenges experienced during the first six months.

Results and discussion: Our findings showed that mothers understood the risks of MTCT of HIV through breast milk while recognising the benefits of breastfeeding and especially EBF to their exposed infants. However, they were particularly concerned about achieving HIV-free survival for their exposed infants because they were worried that their infants may have been born with HIV infection already. Therefore, despite their awareness of the need to practice EBF, challenges remained during the first six months of infant feeding. Some participants experienced poor health for themselves while caring for their infants’ wellbeing. In some instances mothers reported episodes of repeated diarrhoea, signs of chest infections and skin conditions for their infants despite available social support networks within the family and community. The results showed considerable weaknesses in the delivery of infant feeding counselling for HIV-positive mothers to prepare them for the infant feeding experience.

Conclusion: EBF is difficult for mothers in low-resource settings because of gaps in infant-feeding counselling and follow up. We conclude that PMTCT programmes that adopt a once-off infant feeding counselling do not achieve adequate preparation of mothers to practice EBF. Health systems need to provide front-line health care workers with a model for follow-up of HIV-positive mothers in the first six months.

Keywords: Breastfeeding, Exclusive breastfeeding, Experiences, Infant feeding.
Effect of pay-for-performance incentives in chronic disease management: an update systematic review

Co-authors: Li He, BeiBei Yuan, YinZi Jin, China Center for Health Development Studies, Peking University

Background: Recently, pay for performance (P4P) is increasingly applied by providers or insurers to improve quality of care of health providers. However, little is known about how effectively the P4P work for the quality and outcomes of chronic disease. Previously, there was a systematic review on this topic, but was limited to review paper published between 2000 and 2010 through PubMed search, and found that studies were only conducted in USA, Germany, and Australia. An update of review through expanding databases and years of literature search is required to better evaluate the impact of P4P on chronic disease in different countries. Therefore, our study aims to evaluate P4P for healthcare quality and costs of chronic disease through updating the previous review. We hope to provide the most recent evidence and policy advice to policymakers in different countries and managers of health insurance.

Methods: Cochrane review methods were applied in the present study. We searched 12 databases for English language papers up to 2016, including Clinicaltrials, IDEAS, Econlit, EMBASE, MEDLINE, OpenSigle, POPLINE, Cochrane Library, ISI (WOS), ProQuest, PubMed, and PsycINFO databases. Studies with randomized trial, non-randomized trial, controlled before-after study or interrupted time series study design were included. To be included, the target of payment methods must be quality of healthcare, healthcare cost, or patient outcomes of at least one chronic disease.

Results: 12 studies were finally included. Targeted services of disease included hypertension and diabetes. These studies covered two kinds of payment comparisons: P4P vs capitation, P4P vs fee-for-service (FFS) or fixed payment. The included studies were conducted in six countries: UK (5), Canada (1), US (4), Scottish (1), Taiwan (1). Compared with capitation, P4P was effective in improving the provision process of health services, but not on health outcomes of patients. Compared with FFS or fixed payment, the results about the effectiveness of P4P on the quality were varied for both diseases.

Conclusion and implication: Studies on the impact of P4P schemes in encouraging chronic disease management is limited. P4P seems to be helpful for improving the service provision process, compared with other payments; but P4P could not be helpful for improving the health outcomes of patients with chronic conditions. To provide evidence-based policy suggestion, more studies analyzing specific components of P4P scheme is required, including performance measures choice, payment frequency, and if the payment level being sufficient to change the behaviors of health providers.
Rebecca Heidkamp, Johns Hopkins Bloomberg School of Public Health, United States
Abstract ID: 1756

Building tools, systems and capacity for government-led evaluation of maternal newborn child health and nutrition policies and programs: the National Evaluation Platform Tanzania experience

Co-authors: Rebecca Heidkamp, Deobra Niyeha, Deoratius Malamsha, Elizabeth Hazel, Emilia Vignola, Tricia Aung, Robert Black, Albina Chuwa, Johns Hopkins Bloomberg School of Public Health; Johns Hopkins Institute for International Programs; National Bureau of Statistics Tanzania

Purpose: This session will introduce innovative evaluation methods, tools, capacity-building approaches and public-sector engagement strategies developed for the National Evaluation Platform (NEP), a four-year initiative (2013-2017) to support government-led evaluation of maternal, newborn, child health and nutrition (MNCH&N) policies and programs in four sub-Saharan African countries (Tanzania, Malawi, Mozambique, Mali).

Focus/content: The NEP is a new approach to large scale-program evaluation that enables governments to compile and analyze health and nutrition data from diverse sources to produce strategic, evidence-based answers to their most pressing MNCH&N program and policy questions. The current NEP project is funded by the Government of Canada with technical support by the Institute for International Programs at Johns Hopkins University.

We will profile NEP Tanzania to illustrate NEP in action including the process of establishing and supporting high-level coordination, technical working group (TWG) and oversight structures with diverse public-sector MNCH&N stakeholders (e.g. ministries of health, statistical offices, public research institutes); and the use of available data sources (e.g. HMIS, national household & facility surveys) and the NEP Toolbox to answer questions posed by the Tanzanian Ministry of Health about the implementation and impact of their 2008-2015 maternal health strategy. The NEP Toolbox includes online applications, database systems, and decision guidance that support formulation of evaluation questions, data mapping, data management, data quality assessment and statistical analysis. NEP tools are introduced through an innovative capacity building strategy that actively engages NEP TWGs in building NEP over multiple structured cycles where they learn core program evaluation principles, practice using NEP tools, and provide answers to priority evaluation questions endorsed by public-sector MNCH&N leadership. In addition to profiling Tanzania, we will share findings from an external midterm evaluation of the NEP initiative (Jul-Oct 2015) that identified early signs of government ownership and use of NEP findings to inform policy development across the four NEP countries as well as an example of how NEP approach is being adapted and used at scale by the European Commission to evaluate nutrition sector investments in more than 15 countries globally.

Target audience: policy-makers, practitioners and researchers involved in large-scale health and nutrition program evaluation
Daniel Henao, Universidad Tecnológica de Pereira, Colombia
Abstract ID: 3037

"Bye-bye Mosquitoes": the response of the Embera-Chami community to the Zika and Chik epidemics.

Co-authors: Daniel Eduardo Henao, Vanessa García, Alexander Duque, Universidad Tecnológica de Pereira; Observatorio EcoRegional de Salud-Universidad Tecnológica de Pereira; Fundación Con Ciencia

Introducción: Risaralda –con un área de 4140 km2 y un millón de habitantes– es uno de los departamentos más prósperos de Colombia. Infelizmente, también es uno de los más inequitativos. Estas desigualdades afectan sobre todo a los habitantes de zonas rurales y alejadas; y particularmente a los indígenas Embera-Chami, quienes tradicionalmente presentan peores indicadores de salud y enfermedad que la media departamental.

La llegada de las epidemias, de Chikungunya y de Zika, ha exacerbado la terrible situación que padece esta comunidad, por lo que los actores del sistema de salud del departamento hemos planeado y ejecutado una estrategia intersectorial, llamada “Adiós Zancudo”, que se propone prevenir y/o mitigar los efectos negativos de las enfermedades transmitidas por el vector Aedes aegypti.

Métodos: Se creó un escenario de toma de decisiones con representantes: 1. del Estado; 2. de la academia; 3. de los prestadores de servicios de salud; 4. de los aseguradores y 5. de la comunidad. Se definieron actividades destinadas a: 1. Empoderar a la comunidad Embera-Chamí sobre el conocimiento, percepciones y conductas de la enfermedad y sus derechos dentro de la legislación colombiana; 2. Mejorar la calidad de la prestación de los servicios de salud a través de la adherencia a Guías de Práctica Clínica basadas en la evidencia; y 3. Garantizar el acceso eliminando barreas financieras y administrativas.

Resultados: Como indicadores del proceso tenemos: 2355 indígenas alcanzados por la estrategia, el 100% (4) de los resguardos indígenas del departamento intervenidos y 24 líderes indígenas capacitados formalmente como promotores de salud. Adicionalmente, se han desarrollado, de novo, 2 Guías de Práctica Clínica (Zika y Chik); y además de ellas, 4 herramientas para favorecer su implementación (Recomendaciones Trazadoras, Hojas de Evidencia, Estimación de Costos, Algoritmos de tratamiento). Y se ha logrado, también, que todos los procedimientos relacionados con este proyecto sean incluidos en el paquete de beneficios que ofrece el sistema a todos los colombianos.

Como indicador de impacto podríamos mencionar una reducción del 32% y 28% de la incidencia acumulada de Zika y Chik; y además con un aumento del 62% de la tasas de uso de los servicios de salud. Finalmente, la mortalidad, por estos eventos, en los hospitales del departamento es ahora 3 veces menor que la media nacional.

Conclusiones: Las intervenciones intersectoriales, orientadas específicamente a la población indígena, son efectivas para intervenir la incidencia y mortalidad derivada de las enfermedades transmitidas por A. aegypti.
Erwin Hernandez-Rincon, Universidad de La Sabana, Colombia
Abstract ID: 874

Inclusion of the Equity Focus and Social Determinants of Health in Healthcare Education Programmes in Colombia: a Qualitative Approach

Co-authors: Erwin Hernando Hernandez-Rincon, Juan Pablo Pimentel-Gonzalez, Domingo Orozco-Beltran, Concepcion Carratala-Munuera, Universidad de La Sabana; Universidad Miguel Hernandez

Purpose: The Pan American Health Organization (PAHO) and the Colombian Ministry of Health and Social Protection have determined a need for an approach to include Equity Focus (EF) and Social Determinants of Health (SDH) in health training programmes in Colombia. We studied the incorporation of EF and SDH in the curricula of several universities in Colombia to identify opportunities to strengthen their inclusion.

Methods: Qualitative methodology was performed in two stages: 1. initial exploration (self-administered questionnaires and review of curricula), and 2. validation of the information (semi-structured interviews).

Results: The inclusion of the EF and SDH in university curricula is regarded as an opportunity to address social problems. This approach addresses a broad cross-section of the curriculum, especially in the subjects of public health and Primary Health Care (PHC), where community outreach generates greater internalization by students. The dominance of the biomedical model of study plans and practice scenarios focusing on disease and little emphasis on community outreach are factors that limit the inclusion of the approach.

Conclusions: The inclusion of EF and SDH in university curricula in Colombia has primarily focused on increasing the knowledge of various subjects oriented towards understanding the social dynamics or comprehensiveness of health and disease and, in some programmes, through practical courses in community health and PHC. Increased integration of EF and SDH in subjects or modules with clinical orientation is recommended.
PHUONG HOANG, Health Strategy and Policy Institute (HSPI), Ministry of Health, Vietnam, Vietnam
Abstract ID: 2624

CRITICAL ANALYSIS OF STRATEGIC PURCHASING FUNCTIONS AND PERFORMANCE: VIETNAM SOCIAL HEALTH INSURANCE

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Background: Strategic purchasing can improve health system performance and facilitate progress towards UHC. This study analyses Vietnam Social Security (VSS) as the social health insurance (SHI) purchasing agent and its relationship with the Government (MOH and provincial departments of health), providers and citizens using a principal agent framework in order to critically assess existing purchasing performance and identify factors that enable or hinder effective purchasing.

Method: This study synthesizes analysis of multiple information sources: Review of policy documents informed our understanding of the purchasing arrangements; a literature review provided additional insights into the situation in Vietnam; secondary data analysis was performed to better understand health insurance revenues and expenditures; in-depth interviews and focus group discussions with representatives of the purchasing agency, health managers, health care providers and patient councils at health care facilities. The study was implemented in 4 provinces selected to reflect diversity in demographic and economic factors and purchasing arrangements.

Findings: Analysis of the government-purchaser relationship indicates that organizational roles between MOH, as principals and VSS, as agent have been regulated in the Health Insurance Law, however, there is lack of accountability mechanisms. Information sharing between the VSS and the MOH is also weak. In addition, benefit package is not well identified in a transparent manner and poorly evidence-based on cost-effectiveness. In the purchase-provider relationship, current legislation gives the VSS little authority to decide on what to purchase, from whom and how. Claims auditing is inhibited by slow IT development, inadequate manpower for auditing at VSS, and lack of clinical standards, while provider payment reforms are still at initial stages. The purchaser-citizen relationship remains weak, as citizens are unaware of their entitlements and in many regions there was low access to quality health services. Grievances management and citizen oversight are negatively affected by lack of an independent dispute settlement mechanism.

Discussion: Despite the strengths of VSS as a single purchaser in Vietnam, and scaling up to high level of population coverage for a comprehensive benefit package for the entire population, a few challenges remain. To increase effectiveness of strategic purchasing, priority should be placed on refining the legislative framework to ensure accountability of purchaser, information sharing, stakeholder participation in determining benefit packages, strengthening VSS institutional capacity to perform strategic purchasing, and rapid reforms in provider payments and ensuring greater uniformity of health service quality.

Key words: Strategic purchasing, purchasing performance, health insurance, purchaser-provider, government-purchaser, purchaser-citizen relationship
Laura Hoemeke, IntraHealth International, United States
Abstract ID: 1462

**First Do No Harm: The Evolving Roles and Responsibilities of International NGOs in Health Systems Strengthening**

Co-authors: Laura Hoemeke, IntraHealth International

**Background:** Consensus exists that resilient health systems are essential to achieve global health goals. As significant global health actors, international non-governmental organizations (INGOs) have the opportunity to strengthen health systems. Yet INGOs sometimes unintentionally weaken health systems by creating management burdens, distorting labor markets by hiring staff away from the public sector, and exacerbating inequities by offering higher quality care to some segments of a population. In 2008, several INGOs developed the NGO Code of Conduct for Health Systems Strengthening (HSS) to address potential negative impact of INGOs; the Code, however, has not garnered significant attention or endorsements. This research contributes to understanding how INGOs can best support HSS without inadvertently harming national health systems.

**Methods:** The study consisted of a comprehensive literature review and semi-structured key informant interviews with decision-makers from 20 INGOs based in the US, Europe, and Africa conducted in early 2015. Strategic selection of participants targeted influential INGOs who cite HSS as a core competency. Informed consent was obtained from all participants. The University of North Carolina’s IRB approved the study.

**Results:** INGOs feel a “moral obligation,” as mission-driven organizations, to support equity and help give a voice to underserved communities—and to encourage evidence-based decision-making. INGOs also realize they can unintentionally weaken health systems by creating parallel systems and by investing in short-term results to meet project and donor requirements at the expense of achieving sustainable gains. INGOs also can exacerbate inequities through projects implemented on a pilot basis or in specific geographic areas. Key informants felt INGOs can mitigate potential negative impact by developing greater awareness of their effects on health systems, especially when projects are disease-focused or implemented in selected districts and not nationwide. Donor agencies can facilitate INGOs’ work by dedicating funding to HSS and creating more flexible funding mechanisms allowing for systems investments. In countries where ministries of health have greater leadership and management capacity, the work of INGOs contributes more efficiently and effectively to HSS. Key informants shared challenges related to the NGO Code; most suggested the Code be modified and updated, or replaced by a list of principles to guide INGOs in HSS.

**Conclusions:** Recommendations are made to INGOs, donors, and ministries of health to support context-specific priorities, not create internal “brain drain,” avoid parallel INGO- and donor-driven systems, and facilitate country ownership to build the leadership and governance capacity required to build and maintain resilient health systems.
Nick Hooton, ReBUILD RPC, Liverpool School of Tropical Medicine, United Kingdom
Abstract ID: 3087

Becoming more effective actors for evidence-based policy and practice; experiences of research, research uptake and capacity-building from the ReBUILD research programme consortium.

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If institutions for evidence-based health systems are to be supported sustainably, researchers need the skills and experience both to conduct high-quality, relevant research, and to support the use of evidence in policy-making processes. Evidence also needs to be locally contextualised, if it is to support health systems which are both responsive to local context and needs and resilient to shocks. But there is often lack of national capacity to conduct robust health systems research in low-income settings. And where national capacity does exist, links and processes to support evidence-based policy and practice can still be poor, both because of lack of recognition by decision makers of the alternatives to international consultancies, and because of lack of experience and confidence of the national researchers to engage in research uptake activities.

These problems can be magnified in countries affected by fragility and conflict, with exaggerated power imbalances between national and international actors, and where both supply of and demand for locally obtained, nationally-led health systems research is even lower.

The ReBUILD research programme consortium (RPC) has been conducting research into human resources for health and health systems financing in a number of post-conflict settings. Alongside the collaborative research activities involving partners from Sierra Leone, Uganda, Cambodia, Zimbabwe and the UK, ReBUILD has embedded strategies both for research uptake and for capacity-building of partners to become more effective actors in health systems policy processes in the long term.

This paper outlines the approach used, and presents some short case studies showing how the parallel research, research uptake and capacity-building activities have resulted in evidence-based decision-making, and progress towards more sustainable systems for national evidence-based policy. The case studies show particularly how the linkages between southern partners and between southern and northern partners have enabled relevant evidence to feed into both national and international policy discussions, in a more effective way than individual partners could have managed. They also show how the profile, skills and confidence of both southern and northern partners in support of evidence-based policy and practice have benefitted from the flexible and responsive approach to research uptake and capacity-building that the RPC model enabled.
Zhiyuan Hou, Fudan University, China
Abstract ID: 2300

**Determinants of health insurance coverage among people aged 45 and over in China: Who buys public, private and multiple insurances**

Co-authors: Yinzi Jin, Zhiyuan Hou, Donglan Zhang, Peking University; Fudan University; University of California, Los Angeles

Background China is reforming and restructuring its health insurance system to achieve the goal of universal coverage. This study aims to understand the determinants of public, private and multiple insurances coverage among people of retirement-age in China.

Methods We used data from the China Health and Retirement Longitudinal Survey 2011 and 2013, a nationally representative survey of Chinese people aged 45 and over. Multinomial logit regression was performed to identify the determinants of public, private and multiple health insurances coverage. We also conducted logit regression to examine the association between public insurance coverage and demand for private insurance.

Results In 2013, 94.5% of this population had at least one type of public insurances, and 12.2% purchased private insurance. In general, we found that rural residents were less likely to be uninsured (Relative Risk Ratio (RRR) =0.40, 95% Confidence Interval (CI): 0.34-0.47) and were less likely to buy private insurance (RRR=0.22, 95% CI: 0.16-0.31). But rural-to-urban migrants were more likely to be uninsured (RRR=1.39, 95% CI: 1.24-1.57). Public health insurance coverage may crowd out private insurance market particularly among those NCMS and URBMI enrollees (OR=0.55, 95% CI: 0.48-0.63). There exists a huge SES disparity in both public and private insurance coverage.

Conclusion The migrants, the poor and the vulnerable remained in the edge of the system. The growing private insurance market did not provide sufficient financial protection and did not cover the people with the greatest need. To achieve universal coverage and reduce SES disparity, China should integrate the urban and rural public insurance schemes across regions and remove the barriers for the middle-income and low-income to access private insurance.
Natasha Howard, LSHTM, United Kingdom
Abstract ID: 1521

The value of demonstration projects for new interventions: the case of human papillomavirus vaccine introduction in low and middle-income countries

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Introduction: Demonstration projects or pilots of new public health interventions aim to build learning and capacity to inform country-wide implementation. We examined the value of human papillomavirus (HPV) vaccination demonstration projects and initial national programmes in low and middle-income countries, including potential drawbacks, how value might be increased, and how they may inform national scale-up.

Methods: We conducted a systematic review of published and unpublished literature from 37 countries and undertook key informant interviews in 23 countries. Literature and interview data were analysed thematically.

Results: Data came from 55 demonstration projects and 8 national programmes implemented between 2007-2015, approximately 89 years’ experience from 37 countries. Demonstrations allowed national and external partners to gain valuable experience. While countries benefitted from ‘learning by doing’, demonstration projects generally focussed on achieving high coverage, avoided challenging areas or populations, or used unsustainable delivery strategies (e.g. parallel vaccine transport systems). Thus, learning for sustainable national scale-up was inhibited and in numerous cases, national scale-up has not yet followed demonstration project completion.

Conclusions: Well-designed projects can test multiple delivery strategies, implementation in challenging areas and populations, and integration with national systems. Value would increase substantially if demonstration projects were designed to learn specific lessons and inform realistic national scale-up. Initial demonstration projects quickly provided consistent lessons, indicating sufficient collective learning may have been generated in the first 3-4 years. Further learning is likely during national implementation or phased national expansion, which would maintain political commitment to scale-up and improve health system integration. Introduction of vaccines or other novel interventions, particularly those involving new target groups or delivery strategies, needs flexible funding approaches to enable pilots to address specific questions of scalability and sustainability or support phased national roll-out where feasible.
Comparative cost analysis of static versus mobile distribution of insecticide-treated nets in eastern Afghanistan

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Background: Malaria control in fragile and conflict-affected situations represents unique challenges. In Afghanistan, extended conflict since 1979 destroyed public health services and caused a resurgence of malaria. Household usage of insecticide-treated nets (ITNs) in endemic areas is still the most feasible means of malaria prevention. Authors compare provider costs of static versus mobile ITN distribution in eastern Afghanistan.

Methods: An economic analysis with a provider perspective was conducted to compare distribution costs from health facilities versus mobile teams for ITN sales and annual insecticide retreatment. ITNs and retreatment were analysed separately to simplify comparison with long-lasting insecticidal net (LLIN) distribution. Each strategy was costed using a standard ingredients approach, with average and incremental costs calculated, and sensitivity analysis conducted on key assumptions.

Results: The average cost per ITN distributed, excluding net and insecticide costs, was US$0.24 for health facilities and US$0.13 for mobile teams. Retreatment cost US$1.60 for health facilities and US$0.67 for mobile teams. Highest overall cost items were mosquito nets (71%), insecticide (19%), and monitoring (7%). Transport costs were only 1% of health centre and 2% of team costs. Commission and salaries were 2% of total costs, while training was the smallest component for both strategies. Incremental analysis showed that while mobile teams were less costly for low numbers of ITNs, health facilities became less costly when over 8,550 ITNs were distributed.

Conclusion: While static distribution appears most cost-efficient for larger ITN volumes, mobile teams could extend coverage to communities with poor access to health facilities. Mobile teams appear a feasible and relatively low-cost strategy for distributing or retreating small numbers of ITNs in this conflict-affected country and may be appropriate for mop-up distribution campaigns.
Natasha Howard, Scottish Refugee Council, United Kingdom
Abstract ID: 738

Missing from the debate? A qualitative study exploring the role of communities within interventions to address female genital mutilation in the European Union

Co-authors: Natasha Howard, Elaine Connelly, Helen Baillot, Nina Murray, London School of Hygiene & Trop Med; Scottish Refugee Council

Introduction: In recent years, public attention on female genital mutilation (FGM) in diaspora communities has increased within the European Union (EU). However, the role of communities within this discourse has been limited, despite growing consensus that potentially-affected communities are key in addressing FGM. This study explored the role of communities within FGM interventions in the EU.

Methods: A qualitative study design incorporated in-depth key informant interviews and semi-structured group interviews. Data were analysed thematically, guided by the Scottish Government ‘4Ps’ framework (i.e. participation, prevention, protection, provision of services).

Findings: Authors conducted 16 individual interviews and three group interviews comprising 25 policy-makers and service providers and 12 community representatives. Participants emphasised both the importance of potentially-affected communities’ participation and the lack of consistent engagement by policy-makers and practitioners. All indicated that communities had a key role in preventive interventions, though most interventions have focussed on awareness-raising rather than empowerment and behaviour change. Protection-focused approaches, while promoting an unequivocal child-protection message, could create perceptions of families as perpetrators with consequent push-back from communities. The role of communities in planning, development, or delivery of FGM services was not explicitly discussed by participants or the literature, though several community organisations have been established by survivors or potentially-affected communities (e.g. Daughters of Eve, FORWARD).

Conclusion: Findings show that working with potentially-affected communities is vital to addressing FGM across the EU. However, despite clear consensus around the need to engage, support, and empower potentially-affected communities and several EU examples of meaningful community involvement, the role of communities in interventions that respond to and address FGM remains inconsistent. Further engagement efforts between policy-makers and potentially-affected communities are necessary.
Vivian Chia-Rong Hsieh, China Medical University (Taiwan), Taiwan
Abstract ID: 897

**Distributional impact of the universal health care system in Taiwan**

Co-authors: Vivian Chia-Rong Hsieh, China Medical University (Taiwan)

**Background:** Since the inauguration of Taiwan’s National Health Insurance (NHI) in 1995, its fundamental standpoint on seeking to redistribute the country’s social and financial resources has not changed. It enables accessibility to care for those in need regardless of income, sex or health. However, to effectively mitigate the drastic escalation of health care costs without forgoing quality and enhancing “value”, its payment schemes have been continuously reformed in the last 20 years. This study aims to explore the present and lifetime distributional effects of the universal health care across socioeconomic groups with Taiwan’s current health care financing policies and experiences.

**Methods:** Using a longitudinal country-level panel data analysis approach, we used public annual data from two databases: NHI’s 2014 Statistical Annual Report (NHI 2014) and Ministry of Interior’s Abridged Life Tables (MOI 2015). The study period is from 2004 to 2014. First, we measure average health care expenditure, including outpatient, inpatient and reimbursed drug costs, incurred by populations stratified by beneficiary category (occupation), sex and geographical area. Second, we estimate average payments to NHI in the form of premiums by the beneficiaries to fund health care in the same social groups. We subsequently examine the costs and payments in relation to their income for each social stratum in order to observe the distributional impact of health care spending in a single year. Finally, to account for the differential pattern of health care utilization across age groups over their life course, life tables are used to construct a simulation model to estimate lifecourse effects in health spending and payments in different socioeconomic groups.

**Results:** Average total premium payments to finance the NHI reached 406.5 billion NTD (~12.3 billion USD) in the 10-year period, 64.2% of which came from type 1 beneficiary (employees with private/public institutions, employers, civil servants). Their average payroll-based level was also the highest (~1127 USD) among all occupation categories. Women have higher outpatient spending (F/M=1.09) and lower inpatient expenditure (F/M=0.81), but overall, the total health care spending is roughly equal between sexes (F/M=0.93). Most funds are still allocated to the north metropolitan districts where most medical centers are located.

**Discussion:** Lifecourse approach is more likely to reflect true distributions of health expenditures and payments across social groups. Our results established the responsiveness of the NHI to the priorities and realities of populations facing marginalization so as to adhere to its core values of universal health care.
Min Hu, Fudan University, China  
Abstract ID: 2996

The Mandate, Capacity and Purchasing Power of Health Care Purchasing Agencies in China —— Reflections from in-depth interviews with 12 public agencies

Co-authors: Min Hu, Wen Chen, Lijie Wang, Cheryl Cashin, Fudan University; The Second Military Medical University; Results for Development Institute

Background: Strategic health purchasing is a key lever to match health funds with priority services and to achieve health system objectives, which requires institutional authority to make purchasing decisions and enter into contracts with providers, sufficient competence and flexibility to allocate funds to pay for outputs and outcomes, and well-functioning information systems to design and implement purchasing mechanisms. Effective health purchasing also requires purchasing power.

Objectives: This study aimed to assess mandate, capacity, purchasing power of public purchasing agencies and readiness for health purchasing in China, and where possible, institutional arrangements that support successful purchasing practices already implemented.

Methods: The assessment were based on a sample of 12 social insurance agencies selected all over China, using a combination of key informant interviews, supplemented by literature review and analysis of normative policy documents. The interviews followed a structured format using a questionnaire-style interview guide to collect information on institutional capacities related to 5 key purchasing functions: (1) financial management, (2) benefits design, (3) contracting, (4) provider payment systems management, and (5) provider performance monitoring and quality assurance.

Results: It was found that balancing the books is the main mandate of public purchasing agencies in China, and as a result the fundamental relationship between the agencies and providers remains untouched. The main function of the agencies is fiduciary: accountable only for processing billing and claims, containing costs and implementing clinical audit to detect unreasonable practices and fraud. There was no clear mandate for using strategic purchasing and contracting to ensure that services are delivered appropriately and bring value for money. Service quality and clinical outcomes were seldom monitored by the agencies. Payment mechanisms have stimulated an increase in service volume and use by others intend to replicate the initiative or add value to their own trainings rather than routine in-house capacity and their market power has been limited by fragmentation.

Conclusions: China has not provided its public purchasing agencies with the mandate, capacity or purchasing power to leverage strategic purchasing to ensure value for money and effective coverage for the country’s insured. Unchecked expenditure growth that does not bring value for money may threaten the sustainability of China’s public health insurance schemes. There are some promising practices, however, that could serve as models for more effective purchasing practices as China's movement toward universal health coverage continues to demand more attention to strategic cost management, value for money, and quality of care.
Clinical handover communication for outpatients with chronic conditions in India: A mixed-methods exploratory study

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Background: Clinical handover is the temporary/permanent transfer of patient care within/across health systems; there is a dearth of literature on this topic from low and middle-income countries.

Aim: To explore facilitators and barriers to clinical handover communication for outpatients with cardiovascular disease, diabetes mellitus and chronic obstructive pulmonary disease.

Methods: Mixed-methods situation analysis; structured surveys were completed by 513 outpatients and semi-structured interviews were held with 11 outpatients and 17 healthcare practitioners (HCPs). Data was collected from three secondary care hospitals, two Primary Health Centres (PHCs) and one Community Health Centre in Kerala and Himachal Pradesh states, India. Descriptive statistics outlined handover practices. Multivariate analysis investigated associations between vulnerable patient characteristics and provision of handover information from outpatient clinic (OPC) doctors. Qualitative interview transcripts were thematically analysed regarding clinical handover. Quantitative and qualitative results were then triangulated to establish facilitators/barriers to clinical handover communication.

Results: Before OPC appointments: Predominant referral sources to OPCs were doctors from previous OPC appointments (38.1%) and self-referrals (46.3%). Reasons for self-referral were affordability (69.9%) and hospital proximity (23.2%).

Over half of patients brought documents from previous HCPs (58.1%) and 39.2% did not (despite having them at home). During OPC appointments: The majority of patients (83.1%) were verbally advised to return to OPCs for check-up. Most patients were given OPC documents (99.2%), but only 24% contained all of the following information: diagnosis, prescription, medicine and/or longer-term care instructions, and follow-up information. OPC documents were considered important by 85.6% of patients. Female patients and those of lower socio-economic status were less likely to receive verbal follow-up information/recommendations (OR, 0.56; 95% CI, 0.32-0.98 and OR, 0.10; 95% CI, 0.03-0.35, respectively). Patients with low education were more likely to receive verbal follow-up information/recommendations (OR, 1.95; 95% CI, 1.14-3.34). Themes: Five themes were identified: patient preference of hospitals for check-ups/treatment, organisational/health-system factors, HCP communication during OPC appointments, existing referral structures/procedures, and attitudes towards patient-held medical documents. Facilitators & Barriers: Triangulating results produced the following facilitators: Provision of patient-held medical documents, PHC non-communicable disease register, inter-hospital transfer communications, HCP awareness of importance of patient-held medical documents, verbal information/recommendations from HCPs, and patient transportation of medical documents. Barriers produced were: Absence of OPC record-keeping, absence of HCP clinical handover/referral training, time and staffing constraints, absence of standardised referral practices between primary/secondary care, inconsistent provision of healthcare information at OPC appointments, and lack of patient awareness regarding importance of keeping/transporting medical documents.
Conclusions: Patient-driven handover without formal information transfer procedures is leading to inconsistent provision of healthcare information. The implementation of structured protocols and patient/HCP education is recommended.
Lieven Huybregts, International Food Policy Research Institute, United States
Abstract ID: 1557

**Strengthening community level platforms for the treatment of acute malnutrition, through integration of a package of preventive interventions: preliminary results on delivery in West Africa**

Co-authors: Lieven Huybregts, Agnes Le Port, Elodie Becquey, Amanda Zongrone, Malek Abu-Jawdeh, Marie Ruel, Rahul Rawat, International Food Policy Research Institute

Background: Evidence suggests that both preventive and curative nutrition interventions are needed to tackle child Acute Malnutrition (AM) in developing countries. In addition to reducing the incidence of AM, providing preventive interventions may also help increase attendance (and coverage) of AM screening, a major constraint in the community-based management of child acute malnutrition (CMAM) model in Mali. The aim of this study is to assess performance and beneficiary coverage of a program implemented by Helen Keller International that integrates a package of preventive measures into child AM screening delivered by an existing platform of Community Health Volunteers (CHVs).

Methods: We report on preliminary results from a cluster randomized controlled study assessing the impact of an integrated package in 48 health center catchment areas in Ségué region in Mali, 8 months after launch of the intervention. The delivery platform consists of monthly CHV-led village gatherings of caregivers with children 6-23 months of age to screen children for AM and to deliver the enhanced preventive package consisting of strengthened Behavior Change Communication (BCC) on nutrition and health, and the provision of a small quantity of lipid-based nutrient supplement (SQ-LNS). The comparison group receives monthly village-based group BCC and screening for child AM. Coverage data are recorded monthly from a cohort of 1,152 children enrolled at 6 months and followed up until 24 months of age.

Results: Based on 6,571 child-months of follow-up, mean beneficiary attendance at village-level BCC sessions differed substantially between intervention and comparison group (21.1% vs. 2.1%, p<0.001), even after adjusting for BCC sessions actually being organized (37.4% vs 22.4%, p<0.001). A clear trend towards higher attendance over time (+3.5pp/month, p<0.001) was observed, only in the intervention group. If participating in BCC sessions, intervention children were more likely to get screened compared to control peers (68.0% vs 48.6%, p<0.001), and receive actual BCC (87.2 vs 39.8%, p<0.001). On average 92.6% of intervention children participating in BCC sessions received SQ-LNS. In contrast, on average 62.6% of intervention children received SQ-LNS with 23% receiving SQ-LNS from CHVs without BCC or screening.

Conclusion: CHVs implement the integrated package selectively, often distributing SQ-LNS without accompanying BCC or child screening. SQ-LNS may be a motivating factor for caregiver-child dyads to attend BCC, and get their children screened, when CHVs implement all components of the integrated package. This study is funded by Global Affairs Canada and the CGIAR A4NH program led by IFPRI.
Incorporating the significant others into the health system for optimal outcomes

Co-authors: Kemi Esther Ayanda, Yisa Ibrahim, Mike Egboh, Amina Ibrahim, Partnership for Transforming the Health System Phase II (PATHS2)

Background: The role of non-formal contributors to the provision of maternal and child health services is evident in Nigeria, owing to inadequate human resources for the delivery of quality health services. Although multiple approaches have been deployed across the country to mitigate this inadequacy, huge gaps still exist. These gaps provide the premise for a vibrant commercial landscape for a range of service providers in the health system. In Enugu and Lagos states, which are both located in southern Nigeria, this crop of providers offers over 60% of maternal and child health care services. Regardless of the critical role that they play, these non-traditional providers are yet to be fully integrated into the formal health system, thus limiting overall healthcare system performance. A baseline study assessed the impact of non-formal healthcare contributors on maternal, newborn and child health in selected health facilities in Lagos and Enugu and explored opportunities for integrating them into the formal health system through public-private partnerships.

Method: A qualitative study was conducted with 167 in-depth interviews, 72 focus group discussions and 42 baseline semi-structured interviews, targeting 756 government officers, health service providers (private and public), traditional birth attendants, patent medicine vendors, pregnant and reproductive age women, men, community and religious leaders.

Result: The findings of this study indicate that non-formal healthcare providers have been performing various activities which have improved safe mothering and preservation of lives. All respondents agreed that non-formal workers play multiple roles which are not optimally performed by formal health providers, due to several challenges. We also found that these non-formal contributors are critical players in the efforts on health systems strengthening and thus present a myriad of opportunities for systemic and sustainable public-private partnerships (PPPs) in health.

Conclusion: For efficient and robust health system, the non-formal health providers should be integrated into the private health sector. The result of this study has shown that their effort have good and significant complimenting effects, hence a call for training these contributors for efficient delivery has become imperative.

Keywords: Maternal health, child health, public-private partnerships, non-formal health providers
Rolling out the Midwives Service Scheme to increase access to essential maternal care in Nigeria’s decentralized health system: Design matters

Co-authors: Akudo Ikpeazu, Chima Onoka, MELISA Martinez-Alvarez, Dina Balabanova, London School of Hygiene and Tropical Medicine; Institute of Public Health, University of Nigeria, Enugu Campus

Background: Nigeria has among the worst maternal and child health indicators in low and middle income countries (545/100,000 live births & 213 per 1000 live births) and faces multiple health systems constraints to expanding access to essential services. The flagship Midwives Services Scheme, implemented in all 36 states, was thus introduced in 2009 to improve rural staff retention by providing financial incentives and accommodation to rural midwives, and upgraded facilities. The study examines the design of the scheme and how it has reflected the health systems context, resources, needs and population preferences.

Methods: An extensive exploratory qualitative study included 87 in-depth interviews and 8 focus group discussions with policy makers, implementers, midwives and community members at federal level and in two states. Analysis was informed by a new framework examining the fit of the newly designed intervention considering: i) leadership and commitment ii) policy and financing context iii) human resource management capacity and iv) stakeholder participation. Themes were identified and synthesized iteratively.

Results: The broad principle of the scheme was widely supported by program managers and policy makers across the three health systems levels. However, its design was based on federal level program managers’ knowledge of maternal health and worker issues, and limited recognition of the decentralized nature of the health system. The design of a uniform financial package irrespective of pay structure in different states damaged equity. Implementation was hampered by inadequate management and logistical capacity to deal with the complex design, poor absorptive capacity of states for the posted midwives, failure to provide supervision, and welfare issues that affected the midwives. Additionally, the insufficient consideration of the nature of the health system, economic and cultural factors, resulted to poor local ownership and commitment.

Discussion/Conclusion: The midwives’ services scheme was an ambitious national scheme involving a bundled package of interventions to improve access to skilled workers in rural communities. In designing effective human resource retention schemes, the analysis here underscores the importance of designing such schemes to reflect overall health systems structures and processes, decentralized decision and participation in national level programmes, sub-national level factors including local health workers’ preferences and culture. Since decentralisation critically modifies the decision making space, an inclusive process where sub-national actors participate in choosing design options should be a pre-requisite.
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Abstract ID: 2526

Investigating the Perceived Barriers to Early Detection of Breast Cancer in Uganda, Using a Multilevel Approach

Co-authors: Deborah Evho Ilaboya, Linda Gibson, Nottingham Trent University

Background: Breast cancer is a major public health and development issue as it is the leading cause of female cancer mortality globally. It also has a huge impact on global health policy as it is regarded as an emerging epidemic “that will profoundly shape the future of global health, raising fundamental policy, scientific, and caregiving challenges for [sub-Saharan] Africans and the international community alike”. Women in Uganda and other sub-Saharan African countries are disproportionately affected by mortality associated with this disease than their counterparts in developed regions of the world.

Although early detection is known to improve breast cancer prognosis, women in these sub-Saharan African countries present at an advanced stage, usually at stages III and IV characterized by large and almost incurable tumours thereby reducing chances of survival. Despite its increasing incidence and associated mortality, there is limited research on why these women present at an advanced stage. Therefore, there is need for research on barriers to early detection as early is a key component of reduction strategies for breast cancer mortality.

Methods: Recognising that health outcomes are not limited to individual behaviours, but are rather inextricably interlaced with structural factors, this qualitative study was conducted to critically investigate the perceived individual, interpersonal, organizational, community and policy barriers to early detection of breast cancer in selected parts of Uganda through a multilevel lens, underpinned by a socio-ecological framework. The field research was conducted in Ssisa and Kampala, located within central Uganda. Data was collected using a qualitative approach comprising of five semi-structured interviews, seven key informant interviews, two focus groups and analysis of the 2010 Uganda Health Policy and the Health Sector Strategic Plan III 2010/11-2014/15.

Results and discussion: Findings from the study revealed that barriers to early detection of breast cancer are multifactorial and complex, cutting across individual, interpersonal, organisational, community and policy barriers. On the other hand, these findings also highlight suggestions that provide opportunities for policy and practical interventions, particularly through coordinated efforts and investment in multi-level interventions.

Conclusion: In view of these findings, health promotion interventions seeking to improve practices regarding early detection of breast cancer should take a coordinated approach with consideration of the prevailing socio-cultural and political contexts within which the challenge of breast cancer is constructed.
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Abstract ID: 1328

SOLIDARITE AFRICAINE EN ACTION, CONTRIBUTION DE LA REPUBLIQUE DEMOCRATIQUE DU CONGO A LA LUTTE CONTRE L’EPIDEMIE A VIRUS EBOLA EN AFRIQUE DE L’OUEST

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Avec la survenue de toutes ces épidémies, le pays a acquis une expérience et affiné ses stratégies et approches de lutte. Comme résultats, le calendrier de la riposte a été raccourci.

Partant de cette expérience de longue date dans le contrôle et la gestion des épidémies à virus Ebola, la RDC s’est engagée d’aller au secours des pays frères de l’Afrique de l’Ouest.

II. Méthodologie

L’expérience congolaise repose essentiellement sur un trépied : i) la prévention & le contrôle d’infection au centre de prise en charge des cas ainsi qu’à la communauté, ii) la mobilisation communautaire pour l’appropriation de la lutte, iii) un leadership national fort dans la coordination des interventions et des partenaires.

Cette expérience a été coulée sous forme des modules de formation structurée en 8 jours.

III. Résultat obtenu

ü 1 226 cadres ont été ainsi formés dont 1 110 congolais et 116 ouest-africains selon ce modèle.

ü Plus de 100 congolais ont été déployés en Afrique de l’Ouest pour accompagner leurs collègues dans la riposte

IV. Conclusion

Cette expérience est une belle leçon de solidarité et d’échanges d’expériences que nous avons tiré de cette épidémie. Nous sommes organisés en réseau des Ressources humaines de la santé pour améliorer et pérenniser l’approche.
Ona Ilozumba, Athena Institute, Vrije University, Netherlands  
Abstract ID: 1884

**A Mixed Methods Study: Community Health Workers Utilization of Mobile Health Technology in Improving Knowledge and Health Seeking Behavior of Pregnant Women**

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**Background:** Jharkhand, India continues to record high levels of maternal and infant mortality despite policy efforts and specific interventions. Contributing factors are poverty and isolation of rural communities. Sahiyyas, part of the Accredited Social Health Activist program, often the frontline deliverers of maternal health care remain the focus of interventions. One new innovative intervention utilizes mobile technology (mHealth) during home visits to sensitize women about the importance of antenatal care, facility-based delivery and post-natal care. Using a realist inquiry lens, this project explores what worked, for whom and how to understand the effects of (mHealth) technology in improving maternal health care knowledge and behaviour.

**Methods:** The study utilized a sequential mixed (quantitative and qualitative and) methods design. Quantitative: A quasi-experimental study was conducted in three sites. 2200 household surveys (n=740 per region) were collected both at baseline and post intervention. Qualitative: Qualitative data were collected on the process, implementation and perspectives about the mHealth intervention from multiple stakeholders, such as the Sahiyyas who directly received the mobile phones, the women who participated in the program and health professionals.

**Results:** Participant-reported ANC visits increased across all three groups, however, there was a statistically significant difference in increase among the intervention group as compared to the control and quasi-control (p<0.05). This result remained constant when verified using hospital (card) records. Women in the intervention group reported increased knowledge about issues such as importance of ANC and danger signs during pregnancy and delivery, when compared to the control group, but not significantly from the quasi-control group. However, there was no notable difference between the groups on indicators like facility-based delivery and postnatal care utilization. Discussions with stakeholders revealed, that they believed mHealth improved Sahiyyas knowledge, knowledge retention and increased consistency in the delivery of health information. Sahiyyas, health professionals and local government officials also indicated that the mHealth application showed potential for reducing inaccuracies in health information data collection and reporting by simplifying the process and reducing human error.

**Conclusions:** As the mobile technology field advances and mobile phones and networks become ubiquitous, health systems must capitalize on this technology. Study results suggest that mHealth has value as a knowledge generator, data collection and communication tool for Sahiyyas. More research needs to be conducted into intermediary outcomes and context factors such as women’s autonomy,
available infrastructure and health service delivery that mediate the transition of knowledge into the desired health behaviour.
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Abstract ID: 2341

**Women’s experiences of disrespect and abuse during childbirth: results from a population-based survey in 14 districts of Pakistan**

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**Background:** Disrespect & Abuse (D&A) encountered during childbirth can potentially deter women from seeking medically competent care, leading to severe health implications. Limited empirical evidence is available around D&A during childbirth in Pakistan. This epidemiological study, first of its kind from the Asian continent, aimed to assess prevalence of women’s experience of D&A during childbirth and its associated risk factors.

**Methodology:** We used a two-phase approach, first, a comprehensive literature review was conducted on D&A applicable in the developing country setup; second, selected indicators were reviewed and pre-tested for epidemiological measurement. Thirty-six D&A indicators were identified through extensive literature review and classified them into seven behavioural types: physical abuse, non-consented care, non-confidential care, non-dignified care, discrimination, right to information, and abandonment of care. The survey was carried out (April-May 2013) in 14 districts of Pakistan. A total of 1,334 women were interviewed who delivered either at home or in healthcare facility during last 12months. Linear regression analysis applied on overall data and for facility and home-based deliveries separately using Stata ver 14.1.

**Results:** The mean of age women was 28 years, they had averagely 3.3 living children, and majority (56%) was illiterate. The analysis is based on 29 D&A internally reliable (Cronbach’s alpha = 0.80) indicators that were identified using factor analysis. Approximately, ninety-six percent of the women reported to have experienced at least one disrespectful and abusive behavioural act. Experiences for D&A by type are: non-consented care (73.1%), right to information (72.4%), non-confidential care (50.2%), non-dignified care (32.5%), physical abuse (16.5%), and discriminatory care (14.8%). In overall analysis, ethnicity and index of birth preparedness was associated with D&A; interestingly, no difference was found in D&A among women delivery in health facility compared to those delivery at home. Moreover, among women who delivered at home, service provider professional qualification (doctor or nurse), parity, and ethnicity were found associated with outcome; whereas in facility-based group: none showed significant association with the outcome. In all three model, wealth quintile showed no association with disrespect and abusive.

**Conclusion:** Study reveals high level of disrespect and abuse during childbirth. Promoting care that is women-centred and provided in a respectful and culturally manner, service providers at all levels should be made cognizant of the situation. Mixed-method research should be conducted to enhance understanding of D&A in Pakistani settings.
Amy Jackson, Karolinska Institutet, Adam Smith International, Sweden
Abstract ID: 1711

**Withstanding Shocks? How financing for primary care was affected by 10 years of change in Zambia**

Co-authors: Amy Jackson, Jesper Sundewall, Birger Forsberg, Karolinska Institutet

**Background:** Zambia’s health sector has relied heavily on Overseas Development Assistance (ODA) for health and has a history of attempting to coordinate this through the Sector Wide Approach (SWAp). Within the SWAp, cooperating partners (CPs) and the Government pooled funds in to a basket, for use at the district level. However, a corruption scandal in 2009 led to many CPs freezing funds that had been channelled through this basket. Whilst CPs are starting to reconsider channelling funds back through the Ministry of Health (MoH), the consequences of the withdrawal continue to be debated.

**Aim:** To assess the consequences of the cessation of donor funding through the health basket mechanism, by analysing the level and coordination of resources centrally allocated to districts.

**Methods:** A case study was conducted utilising secondary financial data and elite interviews. Central allocations to districts from 2006 to 2015 (budget and actual) were collected from documents held at the MoH and the Ministry of Finance, and adjusted for inflation. Semi-structured interviews were conducted with stakeholders representing the cooperating partners and the MoH to elucidate the financial data and to explore perceptions of coordination in light of 2009.

**Results:** On the surface, financial consequences to districts seem limited. However, the 76% increase in budget allocations over the period was the result of substantial increases in the human resources (HR) budget, which was not executed. The budget for health service delivery suffered an acute decline following 2009, and has never fully recovered. All stakeholders thought the MoH had attempted to make up for the gap left by CPs, but differed in their opinions on the extent. The majority of stakeholders highlighted the need for a reformed SWAp to improve aid effectiveness and achieve results in the health sector, but were in disagreement on what this would look like.

**Discussion/Conclusions:** This case study demonstrates the importance of ensuring a spread of CP and Government resources to mitigate unexpected changes in funding. CP requirements on the use of basket funds could explain why health service delivery suffered a disproportionate decline following the withdrawal of funds. However, whilst attitudes towards coordination are unlikely to return to what they were prior to the corruption event, strengthened leadership from the Government and a renewed commitment to coordination by CPs will be required if the health sector is to learn from 2009 and protect districts from future shocks to health financing.
Translating community action with Ebola to realize gains in immunization coverage.

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Context: The Ebola outbreak in Sierra Leone brought numerous challenges to the country’s fragile health system. Ebola the invisible enemy brought along its own dictates. Touching meant death; a difficult thing to come to terms with, for a nation where daily interactions are often through touch.

The introduction of the Free Health Care (FHC) initiative in 2010 had increased community awareness for skilled attendant delivery and child immunization following delivery. The initiative provided these ANC services for free and consequently with cost no longer a barrier uptake increased by 60%[1]

Ebola threatened to reverse immunization gains significantly. Findings from the Ebola KAP survey in 2014[2] showed over 30% of mothers missed scheduled vaccinations, as facilities were perceived as a source of Ebola transmission.

In response local communities took ownership of the health process. Religious leaders used their platform and messages to reinforce Government Ebola prevention messages; traditional healers traversed hard to reach areas to ensure traditional practitioners adhered to Government protocol of not practicing traditional medicine for Ebola; the union of market women with over 10,000 members used their voice to emphasize the need for continued vigilance and adherence. Through Churches, Mosques, outreach and radio the message spread and the public accepted the “no touch policy” bringing an end to Ebola in November 2015.

Methodology: Against these lessons learnt the Scaling up Nutrition and Immunization Civil Society Platform (SUNI-CSP) initiated a participatory methodology engaging market women, religious leaders and traditional healers to mobilize communities for uptake of immunization and other health services through behaviour.

These community networks are partners with SUNI-CSP, in ensuring the Global Vaccine Action Plan (GVAP) goals are realized by ensuring the last child benefits from immunization.

Result: Communities have now created a dialogue platform that provides the space for health care advocacy on issues such as exclusive breastfeeding, immunization and nutrition. Similarly, through training and outreach services information on individual and family good practice in health care has now been institutionalized in the community.

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Abstract ID: 2880

Qualitative assessment of the Integrated School Health Programme in a rural district of South Africa

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Background: School health lies at the heart of the building of integrated health systems. It requires partnerships and collaboration across different sectors of government, non-state service providers and school communities. South Africa’s health system challenges and quadruple burden of disease are well known, and earlier attempts at fostering an adequate school health system have been unsuccessful. Following this, an Integrated School Health Programme (ISHP) was launched in 2012, piloted in rural, previous disadvantaged health districts. The aim of the study was to describe the implementation of the ISHP in the rural Maluti-a-Phofung district, South Africa.

Methods: Adopting a qualitative approach, the assessment was led by Normalization Process Theory (NPT). Data gathering took place during March 2015. Focus group discussions were conducted respectively with the provincial and district ISHP task teams and a school health team. Seven semi-structured interviews were conducted with provincial and district coordinators, and local school principals. The data was audio recorded, verbatim transcribed, and analysed with the NPT Online Toolkit and the assistance of NVivo (ver. 10).

Main findings: NPT constructs guided the emergence of key findings. In terms of Coherence, participants were generally had a shared understanding of the ISHP and were able to discern it from previous school health initiatives. In terms of Cognitive Participation, key stakeholders drove the implementation forward by means of advocating and liaising with the operational network. Not all stakeholders saw themselves as essential to the success of the ISHP. Some elements such as health promotion were perceived to be shunned in favour of the more biomedical aspects of school health. In terms of Collective Action, networks were built around schools that assisted with the carrying out of some of the ISHP elements. There were however instances of breakages in communication between the school health team and their target schools. Regarding Reflexive Monitoring, most concerns were related to a serious lack of resources – both financial and human. A serious drawback identified was a lack of proper monitoring and feedback systems.

Conclusion: School health as a vital part of the health system – especially in rural areas – was supported by the insights from this study. However, despite an initial national drive to promote the ISHP, challenges such as breakdown in communication between role-players, buy-in from the broader community, and a perceived lack of provincial priority on the importance of school health are key mechanisms blocking in more wide-spread success.
Edgar C. Jarillo Soto, Universidad Autónoma Metropolitana-Xochimilco, Mexico
Abstract ID: 974

El Seguro Popular y el IMSS, cumplimiento del derecho a la salud en México.

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Antecedentes: Como consecuencia de la pretensión de acceso universal a la salud en México, en 2003 se puso en práctica el Seguro Popular (SP). A más de una década de su operación, las evaluaciones sobre su capacidad de respuesta, la atención médica y sus costos, entre otros, son elementos útiles para valorar su efectividad como opción para los sistemas de salud.

Métodos: Con base en fuentes secundarias, se realiza un análisis de datos del Seguro Popular (SP), gestionado por la Secretaría de Salud y se comparan los mismos indicadores con los del Instituto Mexicano del Seguro Social (IMSS) la mayor institución de seguridad social de México.

Resultados: En todos los indicadores analizados el IMSS presenta los valores más altos. En consulta externas generales 39.3%, y por especialidad 37.7% mientras que el SP 17.31% generales y 1.6%. Los días paciente, corresponden 42.8% al IMSS y 7.8% al SP. Los egresos hospitalarios fueron 37.8% y 12.3% para IMSS y SP respectivamente. De los eventos quirúrgicos 43.65% son del IMSS y 12.3% del SP. Por GRD. La atención médica según diagnósticos atendidos el IMSS cubre al 46.6% y el SP 0.7%. Por costos: la consulta externa del SP fue de $1,947, y de $1,646 para el IMSS; por hospitalización se pagan $106,716 en el SP, y $100, 619 en el IMSS.

Discusión: La pretensión de cumplir el derecho a la atención médica a través de cobertura a toda la población por la vía del SP, no se cumple. Los servicios médicos prestados por el SP son restrictivos y más costosos con relación al IMSS. Los resultados evidencian que la estrategia de aseguramiento individual del SP, en contraste con el IMSS de aseguramiento solidario, es ineficiente y presentan diferencias sustantivas a favor del IMSS.

Conclusiones: El aseguramiento del SP como estrategia para cumplir el derecho a la atención a la salud, muestra por sí solo y en comparación con el IMSS, debilidades significativas: la cobertura, uso de servicios, intervenciones médicas, y capacidad de atención tienen restricciones severas.
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Abstract ID: 2200

**Addressing adolescent fertility in Barwani district in rural central India**

Co-authors: Tej Ram Jat, United Nations Population Fund (UNFPA)

Background: The 2008 world population prospects of United Nations reported over 14 million births annually to adolescent girls (15-19 years), of which over 90% were in low and middle income countries including India. Studies show that around half of these pregnancies are associated with the low use of contraceptives. A baseline study conducted in Barwani district of Madhya Pradesh province in central India in early 2011 revealed that 76.1% married adolescent girls (15-19 years) had already experienced pregnancy and the current use of contraceptives and use of spacing methods among them were only 2.4% and 1.2% respectively and unmet need for FP among them was 64.3%. Considering the importance of addressing adolescent fertility, the UNFPA in collaboration with FPAI initiated an operations research intervention in entire Barwani district (population 13,85,881) in 2011.

Methods: The intervention adopted a three pronged strategy: First- capacity building of married adolescents through engagement of Accredited Social Health Activists (ASHAs) and satisfied users as motivators, second- creating an enabling environment through key influencers and community stakeholders, and third- improving the access of married adolescents to quality FP services. An emergent design was adopted for the project wherein needs based interventions were added during implementation such as social diffusion approach to address societal and peer pressure. Around 23,000 adolescent couples (15-19 years) were extensively reached through monthly meetings, trainings, IEC activities and home visits by 906 ASHAs.

Results and Discussion:

An independent assessment of the project conducted in 2014 showed impressive results: Increase in the current use of spacing methods among married adolescents from 1.2% to 30.3%. Increase in the current use of spacing + permanent FP methods among married adolescents from 2.4% to 30.9%. Reduction in unmet need for FP among married adolescents from 64.3% to 42.5%. Reduction of 5 percent points (24% to 19%) in the proportion of currently pregnant married adolescent girls.

Noteworthy improvements were also recorded in the correct knowledge about FP methods, increased self confidence levels and negotiation skills among married adolescents, as well as increased male involvement in family planning.

Conclusion: This operations research project clearly showed that context specific, need based and multi-pronged strategies increased the use of family planning services among married adolescents, reduced the unmet need for FP and proportion of currently pregnant women. The engagement of ASHAs and satisfied users as motivators was very successful strategy which can be used in other similar settings.
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Abstract ID: 1542

Using Data Quality Assessment to Assess and Improve Neglected Tropical Diseases Data Management Systems in Haiti


Background: Haiti is endemic for lymphatic filariasis (LF), a neglected tropical disease (NTD). The National Program to Eliminate Lymphatic Filariasis (NPELF), has achieved remarkable progress, and quality data are crucial to assess progress towards reaching LF elimination.

In 2015, NPELF and IMA World Health carried out a data quality assessment (DQA) using the DQA for NTDs tool developed by WHO and RTI International. The objectives were to assess the quality of reported NTD data for the most recent mass drug administration (MDA) and the ability of data management systems in Haiti to collect, transmit, and report quality data.

Methods: Three indicators were selected for data recounting and verification: number of people treated, number of pre-school and school-aged children treated, and quantity of Diethylcarbamazine distributed.

Random sampling was used to select 12 service delivery sites and multi-stage purposive sampling was used to select the four data aggregation levels: the NPELF, two departments (North and West), one commune per department (Petit-Goave and Quartier Morin), and two community leaders per commune. A one-day training was conducted for two teams on DQA techniques. Data collection was carried out over two weeks. At each site, structured interviews on data management systems were carried out, and teams recounted data.

Results: DQA results are presented at the commune level, the most important data aggregation level. In Petit-Goave, West Department, information on the availability, timeliness, and completeness of reports was not available because reports from the lower data aggregation level were unavailable. The data management system score was 1.80/3. The data verification factor (ratio of recounted value to reported value) ranged from 0.93-0.99.

In Quartier Morin, North Department, 100% of reports were available, 67% were timely, and 33% were complete. The data management system score was 1.38/3. The data verification factor was 1.0.

Discussion: The DQA highlighted the problem of missing data and data quality at some intermediary data aggregation levels. Weaknesses included lack of designated staff for data management and quality control guidelines. Strengths were strong communication among community leaders and commune staff. The suboptimal performance in some areas indicates need for data management training, more
frequent DQAs and data feedback to lower levels to improve data flow/facilitate corrective actions, and improving data storage at each level to increase data availability. These steps will help ensure Haiti reaches its LF elimination goals and inform other health interventions delivered by community-level volunteers including vaccination and bed net distribution.
Government Commitment Enhanced Use of Innovative Technology (GxAlert) for DR-TB Enrollment and Management in Nigeria

Co-authors: Abt Associates - HFG Project; Abt Associates; SystemOne Inc

Background and Challenges to Intervention: The world Health organization rank Nigeria among high DR-TB burden countries in the world. The country relies on GeneXpert machine to often diagnosis DR-TB at a designed location away from the patients. However, testing for TB and reporting results is a lengthy process partly due to a reliance on paper records, overburdened labs, and slow data transit systems making it difficult for the Nigeria Tuberculosis Program to account for patients diagnosed for DR-TB, enroll them for care and management decisions are not timely or focused on priority needs.

Intervention: Abt Associates and SystemOne supported Nigerian Tuberculosis and Leprosy Control Program (NTBLCP) to develop a highly innovative mobile-based solution across 46 laboratories in Nigeria. GxAlert is configured on GeneXpert systems by installing a modem from a telecom that gives access to internet and encrypting the data sent to the GxAlert database. The system sends GeneXpert MTB/RIF diagnostic results in real time to a secure web-based database, shortening a reporting period from months to mere seconds and enabling better data quality and faster recruitment of patients into appropriate care. Due to its success in improving data system and patient management, the government decided to scale up to all facilities in the country.

Results and Lesson Learnt: GxAlert eliminated the need for human error in data entry, reduced the lag time, and helped pinpoint patients that should be place on care. More patients have been enrolled for DR-TB care. GxAlert strengthened surveillance of DR-TB, TB in children and TB in the HIV infected, speeding response and improving programmatic decision making for enrollment and placement of DR-TB patient on treatment. GxAlert also Prevent cartridge stock-outs and track usage for accurate ordering. GxAlert has received adequate government commitment. The use of GxAlert in genexpert machines has a Model for Sustainability. The technology is kept simple as local telecom modems which are readily available and affordable for GxAlert connectivity.

Conclusions and Key Recommendations: Networking all the rapid GeneXpert diagnostic machines in Nigeria to GeneXpert, the National TB and Leprosy control program and private health systems are now able to report rapid TB and HIV indicators automatically and send targeted action messages (“alerts”) by SMS/text and/or email to health system decision makers, deliver real-time disease surveillance data to the GxAlert database. There’s ownership and sustainability from government of Nigeria as the NTP is scaling up to all the genexpert facilities nationwide.
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Abstract ID: 753

**Integrated Pediatric Fever Management and Antibiotic Over-Treatment in Malawi Health Facilities: Data Mining a National Facility Census**

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Background: There are concerns about growing irrational antibiotic prescription practices in the era of test-based malaria case management. This study assessed integrated pediatric fever management using malaria rapid diagnostic tests (RDT) and Integrated Management of Childhood Illness (IMCI) guidelines, including the relationship between RDT-negative results and antibiotic over-treatment in Malawi health facilities in 2013-2014.

Methods: A Malawi national facility census included 1,981 observed sick children 2-59 months with fever complaints. Weighted frequencies were tabulated for other complaints, assessments, and prescriptions for RDT-confirmed malaria, IMCI-classified pneumonia, and clinical diarrhea. Classification trees using model-based recursive partitioning estimated the association between RDT results and antibiotic over-treatment and learned the influence of 38 other input variables at patient-, provider-, and facility-levels.

Results: Among 1,981 clients, 72% were tested or referred for malaria diagnosis and 85% with RDT-confirmed malaria were prescribed first-line anti-malarials. 28% with IMCI-pneumonia were not prescribed antibiotics (under-treatment) and 59% ‘without antibiotic need’ were prescribed antibiotics (over-treatment). Few clients had respiratory rates counted to identify antibiotic need for IMCI-pneumonia (18%). RDT-negative children had 16.8 (95% CI: 8.6-32.7) times higher antibiotic over-treatment odds compared to RDT-positive cases conditioned by cough or difficult breathing complaints.

Conclusions: Integrated pediatric fever management was sub-optimal for completed assessments and antibiotic targeting despite common compliance to malaria treatment guidelines. RDT-negative results were strongly associated with antibiotic over-treatment conditioned by cough or difficult breathing complaints. A shift from malaria-focused ‘test and treat’ strategies toward ‘IMCI with testing’ is needed to improve quality fever care and rational use of both anti-malarials and antibiotics in line with recent global commitments to combat resistance.
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Abstract ID: 1436

Le transfert-application des données probantes dans les politiques et programmes de santé maternelle et infantile en Afrique de l’Ouest : état des lieux

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Introduction: L’Organisation Ouest Africaine de la Santé regroupe 15 états-membres de l’espace CEDEAO. Dans le cadre de l’initiative IMCHA, l’OOAS doit promouvoir la décision éclairée par les données probantes dans les politiques et programmes de santé maternelle et infantile (SMNI) et elle a mené une analyse de la situation dans six pays.

Objectif: Analyser les forces et les faiblesses du transfert-application des données probantes dans les politiques et programmes de SMNI

Méthode: Dans les six pays cibles du projet (Bénin, Burkina Faso, Ghana, Mali, Nigéria et Sénégal), nous avons mené une analyse contextuelle combinant une revue des documents politiques et plans stratégiques de la période 2005-2015, une revue des travaux scientifiques, une analyse des parties prenantes, un atelier d’engagement des parties prenantes sous forme de forum délibératif, des entretiens approfondis et une enquête par questionnaires auto-administrés individuels. Une analyse contextuelle régionale a combiné une évaluation des déterminants systémiques sanitaires et de la dimension genre et équité dans les politiques et programmes de SMNI.

Résultats: La démarche prépondérante d’élaboration des politiques et programmes de SMNI est consultative. Le processus d’intégration des données probantes est surtout implicite. L’environnement organisationnel est jugé peu propice à la décision éclairée par les données probantes. Les plateformes pilotes de transfert-application de données probantes ont un fonctionnement approximatif par pénurie de ressources endogènes. L’enquête individuelle a révélé: (i) des insuffisances en matière de compétences informatiques et de méthodologie de la recherche; (ii) une maîtrise approximative des processus d’acquisition, d’évaluation, d’adaptation, et d’utilisation des données probantes.

Conclusion: L’OOAS dispose actuellement d’une opportunité pour booster les efforts endogènes de promotion de la décision éclairée par les données probantes pour améliorer la SMNI.
Kristina Jönsson, Lund University, Sweden  
Abstract ID: 1365

**Legitimation of the Sustainable Development Goals on health: a conceptual framework**

Co-authors: Kristina Jönsson, Magdalena Bexell, Lund University

Purpose: This paper aims to study how legitimacy is generated and challenged in processes of implementing globally adopted health policies.

Focus/content: The paper explores the United Nations’ Sustainable Development Goals with special focus on Goal 3: Ensure health lives and promote well-being for all at all ages. The United Nations General Assembly’s adoption of the new goals has triggered a translation process of those into policymaking at different levels of society with ensuing legitimation challenges that, we argue, condition implementation prospects. We study the processes and sources that shape perceptions of legitimacy among health actors. Due to the holistic character of the Sustainable Development Goals the range of stakeholders for each goal has expanded, potentially challenging current policy structures, power relations and the political economy of the global health and development arenas. Our theoretical framework includes a spectrum of legitimation and delegitimation strategies, a conceptualisation of the authors, audiences, and objects of legitimation, and the legitimacy sources and contextual factors that condition legitimation processes. This explorative paper sketches a conceptual framework that can be used in future empirical studies on global health governance as well as in the study of other sustainable development goals. The paper uses illustrative empirical examples drawing on United Nations documentation of the post-2015 consultation processes as well as other policy related material.

Significance for the sub-theme area/field-building dimension of relevance and target audience: The long-term character of the Sustainable Development Goals implies that issues pertaining to its legitimacy, or lack thereof, will remain central for many years as legitimacy can be expected to impact governance and implementation of the new goals. Yet, there is a lack of studies with a legitimation perspective on the Sustainable Development Goals. The target audience is those with an interest in the politics of the Sustainable Development Goals.
Poster Abstracts

Pamela Juma, African Popultaion and Health Research Center, Kenya
Abstract ID: 2091

Multi-sectoral Approach in NCD prevention policy development in five sub-Saharan African countries

Co-authors: Pamela Atieno Juma, Shukri Mohamed, Catherine Kyobutungi, African Popultaion and Health Research Center; African Population and Health Research Center; African Population and Health Researc rh Center

Abstract: Background: Non-communicable diseases (NCDs) are increasing in sub-Saharan Africa. Out of the many NCDs, four – cardiovascular diseases, diabetes, cancers and chronic respiratory illnesses have been identified globally as being responsible for the greatest burden. These four disease groups also share a set of four risk factors namely tobacco use, unhealthy diets, alcohol misuse and physical inactivity. These risk factors are in turn influenced by factors in the social, physical, economic and wider environments, thus efforts to address NCDs require a Multi-sectoral approach (MSA). There is limited evidence on successful use of MSA in policy formulation and implementation in sub-Saharan Africa. This study aimed at generating evidence on extent of application of MSA in NCD prevention policy development in five countries (Kenya, South Africa, Cameroon, Nigeria and Malawi), focusing on the WHO best buys for NCD prevention.

Methods: Multiple case study design was used to capture rich descriptions of single policies as well as analysis across policies in each country. Data was collected through document reviews and key informant interviews with decision makers in various sectors. Further consultations with NCD experts on application of MSA in NCD prevention policies in the region was also done.

Results: The findings revealed that there is some degree of application of MSA in NCD policy development in these countries. However the level of sector engagement varies across different NCD policies, from passive participation to active engagement. There was higher engagement of sectors in the development of tobacco policies across the countries, followed by alcohol policies. Although not well developed in all countries, physical activity and unhealthy diet policies have had the lowest participation of different sectors. The main facilitators to MSA in policy development process included having champions to drive the process and advocacy by NGOs and civil society organizations. The main barriers included lack of awareness by the sectors about their potential contribution, low political will, coordination complexity and inadequate resources.

Conclusion: The findings illustrate various challenges in bringing sectors together to develop policies to address the increasing NCDs in the region. There is need for stronger coordination mechanism among sectors to facilitate MSA in NCD prevention policy development. Such mechanism should include approaches to generate funding to enable policy formulation, implementation and monitoring of outcomes. In addition, ownership and financial commitment from the government is crucial to the development and implementation of NCD prevention policies and programs in the region.
Poster Abstracts

Rahul Sankrutyayan Reddy Kadarpeta, National Health Systems Resource Centre, Ministry of Health and Family Welfare, Government of India, India
Abstract ID: 1419

Institutionalization of Health Accounts in India: Buidling capacity at States Level

Co-authors: Rahul Sankrutyayan Reddy Kadarpeta, Tushar Mokashi, National Health Systems Resource Centre, Ministry of Health and Family Welfare, Government of India

Purpose: National Health Accounts for India have been estimated for financial year 2013-14 by National Health Systems Resource Centre (NHSRC), mandated by Ministry of Health and Family Welfare. The last NHA estimates for India were generated in 2004-05. Though it was envisaged that there would be regular NHA estimates, a 10 year gap was due to lack of capacity building at national and state level. NHSRC has now institutionalized the process of generating health accounts for India and is building capacity at state level to take the initiative forward.

Content: Health accounts provide a systematic description of the financial flows related to the consumption of health care goods and services and a standard for classifying health expenditures according to the three axes of consumption, provision and financing. All health expenditures are included regardless of how or by whom the service or good is funded or purchased, or how and by whom it has been provided. The methodology to arrive at the estimates is complex and involves collection of data from various existing sources. Surveys are conducted to fill gaps where data is currently not available. The system of health accounts 2011 is a standardized global methodology that provides guidelines and methodology to arrive at estimates. These guidelines have been contextualized to arrive at India specific estimates looking at the availability of data and defining India specific indicators. A team at National Level established at NHSRC arrived at estimates for financial year 2013-14. For sustainability of conducting this exercise annually or at regular intervals, NHSRC is institutionalizing the process at state level in every state in India. This will build capacity among experts for national level estimates and to arrive at state specific estimates as state health context varies widely in India. This allows states to have evidence based policy interventions specific to their health financing context.

Significance: This is highly significant as there are new partnerships being built through these capacity building exercises among individual experts, universities, insurance authorities, health departments, finance departments and Ministries/other departments spending on health to share data and analysis widely. This is also a way to consolidate evidence related to healthcare financing and enabling a continued evidence generation in future years as this a structure program with high level expert and steering group being established.

Target Audience: health systems researchers, policy makers, healthcare financing and NHA experts,
Maia Kajaia, Health Research Union, Georgia
Abstract ID: 1694

Impact of Targeted Health Insurance on Health Service Utilization, Expenditures and Health Status among IDP Population in Georgia

Co-authors: Maia Butsashvili, George Kamkamidze, Lela Serebryakova, Maia Kajaia, Lavrenti Geradze, Health Research Union

Background: There are over 300,000 internally displaced persons (IDPs) currently residing on the territory of Georgia, which comprises over 15% of total population. Starting from 2008, Georgia launched targeted health insurance (THI) coverage for a selected group of IDPs. Health insurance covered essential primary healthcare services, selected hospital care and essential drugs.

Purpose: Objective of the research is to study health expenditures, utilization and status among IDPs with THI and without THI and analyse factors, such as urbanization, compact settlement or integration and their impact on health utilization and expenditures.

Significance: Internationally, evidence on the impact of provision of health insurance to individuals affected by humanitarian crisis is very scarce. Furthermore, impact of THI as one of the key health financing policies in Georgia has not been evaluated in IDP population, despite the fact that the program had been in place for over 5-years.

This study is measuring the effect of targeted intervention versus untargeted approach to health financing that will also contribute to the debate over the type of intervention that best fits the healthcare needs of humans in crisis. Study results will be applicable to the settings where crisis resilience spans over significant time period.

Methods: This research is using Health Utilization and Expenditure Survey (HUES) tool.

The study is carried out in capital city Tbilisi and selected settlements from Western and Eastern Georgia. IDPs residing in compact settlements (specifically built accommodation or administrative building allocated by the Municipal Government) are included in the study.

Retrospective cohort study design is used with two groups of IDPs with different exposure to health insurance: IDPs having THI and not having THI. In addition, the survey results will be compared with findings of HUES in general population of Georgia, which had been completed in 2014. The impact of THI on health service utilization, health care expenditures, health status and satisfaction will be estimated.

Expected outcomes: The study is on data collection phase. After data analysis, we will have improved the understanding of the potential of THI to address healthcare needs of individuals in a long-term crisis, which can greatly contribute towards improved planning of sustainable health programs for persistent humanitarian crisis setting. As the survey tool HUES is widely accepted method in many low and middle-income countries, technical feasibility of its replication is high.
Anuska Kalita, India
Abstract ID: 3166

Exploring Alternative Financing Mechanisms for Universal Health Coverage in India

Co-authors: Anuska Kalita, Nachiket Mor, IKP Investment Management; Bill and Melinda Gates Foundation

Purpose: The purpose of this study is to explore financing mechanisms that can contribute additional resources for healthcare to sustainably address current and emerging challenges. India has long had a commitment to offer universal health care (UHC) and this has been well articulated in government policies. However, one of the main barriers to this goal is optimum financing. The problem is two-fold - first, high out-of-pocket at point-of-service health expenses in India (58%) significantly alters the household budget, it reduces consumption of non-health goods and services, reduces accessibility to healthcare and pushes many families into poverty; and second, current government allocations towards healthcare are insufficient for designing sustainable and contemporary health systems that can keep pace with technological, demographic and epidemiological shifts in the country.

Focus: While allocation from general tax revenues for healthcare needs to continue, increased allocation from the general tax pool alone will not be enough to achieve UHC – especially given problems associated with the Laffer Curve and deadweight loss associated with high levels of taxation, particularly in India where the tax-to-GDP ratio is very low.

Pre-payment and pooling mechanisms through well-designed comprehensive health insurance programs, replacing the currently fragmented schemes, are required to achieve UHC goals and prevent impoverishment. The study outlines specific design elements for a comprehensive health insurance scheme in India with specific departure from current trends - inclusion of the largely uninsured middle income families, payroll-contributions from individuals above the poverty-line, government subsidies for low-income groups, entitlement to an essential benefit package, and improving equity through pooling. The paper estimates the volumes of tax revenues and payroll contributions that may be obtainable by India through such an insurance program, and identifies some of the important health systems reforms, political and macro-level conditions that would be necessary for successful implementation.

The study also examines innovative funding strategies and their feasibility for Indian healthcare such as a health cess, health trust funds, tax-free bonds and funds from private corporations to supplement financial resources.

Significance: The manner in which health services are financed will influence effectiveness and outcomes of the health system. Efficient mechanisms and optimum utilization of available funds are required for India to get “more health for money”, with new and sustainable designs of health systems financing to meet the costs of UHC, including the introduction of new technologies and tools as they become available.
Karin Kallander, Malaria Consortium, Unit
Abstract ID: 1363

Do innovations to address community health worker motivation and performance lead to improved coverage of appropriate treatment for common childhood illnesses in Uganda and Mozambique

Co-authors: Karin Kallander, Seyi Soremekun, Raghu Lingam, Frida Kasteng, Ana Cristina Castel-Branco, Edmund Kertho, Juliao Condoane, Nelson Salomao Nhantumbo, Agnes Nanyonjo, Maureen Nakirunda, Patrick Etou Lumumba, Benson Bagorogosa, Sylvia Meek, Daniel Strachan, Malaria Consortium; London School of Hygiene & Tropical Medicine; University College London

Background: If trained, equipped and utilised, community health workers (CHWs) delivering integrated community case management (iCCM) for sick children has potential to significantly reduce child deaths. However, high CHW attrition rates and substandard quality of care is common. The inSCALE project has evaluated the effect of two interventions to increase CHW supervision and motivation on coverage of appropriate treatment for children with diarrhoea, pneumonia and fever (DPF).

Methods: Baseline surveys were conducted to allow restricted randomisation of clusters into intervention and control arms. Two interventions were developed in Uganda and one in Mozambique. In Uganda, 3,500 CHWs in 39 clusters were randomised to a mHealth intervention, a community participatory learning action cycle intervention (through village health clubs) and to a control arm. In Mozambique, 275 CHWs in 12 clusters were randomised into an mHealth arm and a control arm. A process evaluation was conducted after 10 months, while endline surveys established impact after 12 months in Uganda and 18 months in Mozambique.

Results: Care-seeking from CHWs increased across all arms in Uganda, but less in the community arm, and not at all in Mozambique. Children in the mHealth arm were more likely to receive appropriate treatment than in the control arm (pooled RR 1.10; 95%CI 1.01, 1.19); this was significant in Uganda (RR 1.09; 95%CI 1.01, 1.19), but not in Mozambique (RR 1.17; 95%CI 0.90, 1.52). The largest effect was seen on diarrhoea in both Uganda (RR 1.39; 95%CI 0.90, 2.15) and Mozambique (RR 1.66; 95%CI 0.79, 3.48). There was a smaller impact in the community arm in Uganda (RR 1.08; 0.99, 1.17), with the largest effect seen in diarrhoea (RR 1.57, 95%CI 1.05-2.34). A small but significant reduction in CHW attrition was observed in Uganda in the community (RR -0.019; 95%CI -0.03, 0.01) and mHealth (RR -0.028; 95%CI -0.04, -0.001) interventions. Motivation and performance did not change appreciably in the intervention arms and CHW motivation was notably high across the board.

Discussion: The inSCALE interventions resulted in consistent improvements in appropriate treatment for sick children with DPF. These improvements occurred despite drug stock shortages – suggesting that greater gains are possible if interventions better target these issues. Health facilities also saw improvements in appropriate treatment, suggesting that alternative mechanisms were responsible – perhaps better referral from CHWs to health facilities. CHW motivation was high, suggesting that CHWs might actually be motivated, when we assumed underperformance stemmed from low motivation.
Kayo KANEKO, Niigata University of Health and Welfare, Japan
Abstract ID: 2188

Acquired competence to respond to maternal and neonatal emergency in challenging conditions: A qualitative study in Burundian rural area

Co-authors: Kayo KANEKO, Juma NDEREYE, Jacques NIYONKURU, Ancilla MANIRAMBONA, Bernadette NKANIRA, Kae FURUKAWA, Niigata University of Health and Welfare; Director of National Reproductive Health Programme, Ministry of Public Health and Fight Against HIV/AIDS Burundi; Chief officer, Direction of Demand and Supply of Care, Ministry of Public Health and Fight Against HIV/AIDS Burundi; Technical officer, National Reproductive Health Programme, Ministry of Public Health and Fight Against HIV/AIDS Burundi; Program Coordinator, JICA Burundi

Background: To ensure resilient health system, front–line health worker’s training is indispensable. As traditional approach, we conduct routine training programs according to international guideline. However, front–line health workers in challenging condition acquire competence which haven’t been mentioned in guidelines. We undertook a qualitative study to ask “How Burundian nurses successfully responded to maternal and neonatal emergency in challenging conditions” for identifying acquired competences.

Methods: 48 semi-structured interviews were conducted with Burundian nurses who have clinical experience at least 5 years in primary and secondary health facilities. Data were audio-recorded, transcribed in Kirundi and translated into French and analyzed inductively between collaborators.

Results: We collected 51 histories which describe real emergency situation in Burundian rural area. And, four types competences were identified; 1) Assess the situation based on a series of continuum care, 2) Observe and judge the situation and own ability, 3) Establish an active social support network, 4) Use appropriately medical information tools (medical records and home-based records).

Discussion: Even if recommended, in many cases, high risk mothers often come to give a birth to primary health facility. Particularly, to respond to these cases, Burundian nurses acquired competences above mentioned. Increasing BEmoC facilities is an urgent issue. But our finding suggest ensuring active social support network is also important to respond maternal and neonatal emergency. We recommend to establish active social support network between community- rural health facilities- regional health administration office- nursing school while implementing routine training programs.
Almamy Kante, Columbia University, United States
Abstract ID: 1469

A Randomized Cluster Trial of the Child Survival Impact of Deploying Paid Community Health Workers in rural Tanzania

Co-authors: Almamy Malick Kante, Elizabeth Jackson, Amon Exavery, Colin Baynes, Tani Kassimu, Ahmed Hingora, James Phillips, Columbia University, Ifakara Health Institute

Background. It is a common claim that randomized cluster trials (RCT) are the most rigorous means of assessing health intervention impact. However, despite widespread investment in community health workers (CHW), such programs have yet to be evaluated with an RCT. This paper presents results of an RCT that tested the child mortality impact of recruiting CHW, training them for nine months in primary health care service delivery and deploying them to their villages as paid workers to conduct preventive, promotive, and curative antenatal, newborn, child, and reproductive health care services.

Methods: A dispersed random sample of 50 intervention communities have been provided with these CHW and 51 randomly assigned comparison villages were selected in Rufiji, Kilombero and Ulanga Districts of Tanzania where a Surveillance System operates in all 101 study villages since 1996. As of 2015, demographic dynamics were monitored for 375,000 individuals resident in this study area.

Regression models are used to assess covariates of childhood mortality as hazard ratios (HR) and Relative risks (RR). Statistical balance is assessed by comparing HR/RR for intervention and comparison villages four-year prior to the experiment (August 2007-July 2011) and results are ascertained by statistical comparison of post CHW deployment, with analyses segmented by observation time, separating the initial period (August 2011-July 2013) from the subsequent two-year period (August 2013-July 2015). Monitoring assessed fidelity to the design by incorporating indicators of the availability of essential medicines. Observation time is incorporated to account for secular mortality trends.

Results: CHW deployment had significant initial effects among children aged 1-59 months (post-neonates) (adjusted HR=0.86 95% CI 0.75-0.97, p=0.016), but no impact on neonates (adjusted RR=1.13 95% CI 0.91-1.41, p=0.279). Moreover, results for the early project era contrast with the subsequent period by showing that the impact of CHW deployment atrophied with time. Investigation of the possible causes of this diminishing effect show that access to essential supplies deteriorated as the experiment progressed, a trend that covaries with childhood mortality.

Conclusion: Findings attest to the importance of system resilience for sustaining CHW impact. While initial results show that CHW can accelerate health development in rural African settings, their success is conditional upon the concomitant implementation of essential support systems. Although post-neonatal mortality was reduced by the intervention strategy, CHW deployment had no effect on neonatal mortality. Moreover, effects on post-neonatal mortality were conditional upon concomitant provision of supply systems support of their work.
Avril Kaplan, Johns Hopkins University, United States
Abstract ID: 2909

Communitization of health services in Nagaland, India: Lessons learned after more than a decade of implementation

Co-authors: Avril Kaplan, Nandira Changkijia, Krishna D Rao, Patrick Mullen, Aarushi Bhatnagar, Johns Hopkins University; Department of Health and Family Welfare; World Bank; Public Health Foundation of India

Background: Since 2002, the Government of Nagaland has been working to make health services more responsive to community needs through the Communitization of Public Institutions and Services Act. Communitization was designed as a third model of governance for service delivery. In the health sector, the state government has established committees that incorporate community representatives to help manage health services at government facilities. These committees have authority to supervise staff and approve their salaries, develop and execute annual plans for the facility, procure medicines, maintain infrastructure, and raise additional money from within the community to support the facility. After fourteen years of implementation, the purpose of this session is threefold: to share lessons learned to engage and build capacity within communities to effectively manage health facilities; to describe challenges associated with implementing the statewide initiative over a sustained period of time; and to share insight from people implementing communitization on a daily basis about how the initiative can be strengthened in the future.

Methods: This session will describe the Government of Nagaland’s process to implement communitization. The session will transition to focus on the strengths and limitations of Communitization today, taking into account three perspectives – those from committee members, health workers, and community members. Drawing on 80 in depth interviews with these actors, the session will conclude with perceptions about how the committees can improve their functioning.

Results: The government designed Communitization to be a community driven intervention, so the policy has never been mandated. Instead, implementation occurs from the bottom up allowing communities to decide whether they want to partake in the initiative. Communitization is widespread throughout Nagaland as a result of initial policy changes, capacity building initiatives, awareness campaigns, and interest from within communities. Findings from the in-depth interviews reveal that today, several health system constraints prevent the health committees from effectively managing the facility. Recommendations to improve committee functioning include having stronger engagement between the government and community through supervision and greater incentives for committee members.

Conclusions: Many countries have incorporated community members into health facility management to improve health service delivery and health system responsiveness. However, the initiative in Nagaland is unique given the extent of authority handed over to the community and the length of time
Communitization has been in place. As a sustained health system intervention, the Naga experience with Communitization has relevance for policymakers and public health practitioners globally.
Ali Karim, JSI Research & Training Institute, Inc., Ethiopia  
Abstract ID: 134

**Measuring intervention coverage to track progress towards maternal and newborn mortality reduction targets of the Sustainable Development Goals: Setting a system in Ethiopia**

Co-authors: Ali Mehryar Karim, Gizachew Tadele, Nebiyu Getachew, Bantalem Yeshanew, Nebreed Fesseha, Wuleta Betemariam, JSI Research & Training Institute, Inc.

Purpose: Availability of cost-effective interventions that can address the main causes of maternal and newborn deaths in low-income countries has prompted the post-MDG agenda—i.e., Sustainable Development Goals (SDGs)—to set ambitious targets for reducing global maternal mortality ratio to less than 70 per 100,000 live births and neonatal mortality rate to 12 per 1,000 live births by 2030. The Health Sector Transformation Plan of the government of Ethiopia reflects that the country is committed towards achieving the SDG targets. High coverage of proven effective maternal and newborn health (MNH) interventions will be required to reach the SDG targets. Routine monitoring of intervention coverage, disaggregated by sub-populations, for accountability, planning and resource allocation has been linked with programs achieving substantial reductions in child mortalities during the MDG era. Accordingly, Every Newborn Action Plan (ENAP), a global multi-partner movement to end preventable maternal and newborn mortalities, fosters countries not only to implement high impact MNH interventions but also routinely measure their coverage to track progress for evidence based action.

Content: This presentation details the strategies that were put in place by The Last Ten Kilometers Project (L10K) 2020 Project, funded by the Bill & Melinda Gates Foundation, in 115 rural districts of rural Ethiopia to foster the local health program managers to measure and track coverage of high impact MNH interventions to identify gaps and take actions to accordingly. The proposed solutions take advantage of the existing facility based patient management information systems to aggregate relevant data elements for calculating the required indicators and use them to improve program performance and intervention coverage. The presentation also describes the framework put in place to assess the validity and reliability of the indicators measured. Reliability will be mainly done through facility surveys while validity will be assessed through observations of client-provider interactions.

Significance: Many of the high impact MNH interventions, especially those that are new, lack standard definitions or are not routinely measured or both. ENAP developed a framework and identified core indicators to track the coverage of the high impact MNH indicators and suggested possible ways to measure them. However, the feasibility, reliability and validity of measuring the indicators, especially those that rely on health management information systems, in practical situations are not well documented.

Target audience: ENAP stakeholders; policy makers, program managers, donors and researchers of maternal and newborn health programs; and health management information systems and program performance measurement specialists.
Jiban Karki, The University of Sheffield, United Kingdom
Abstract ID: 2528

Health System Actors' Participation in Primary Health Care in Nepal

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Background: Nepal has theoretically been an early adopter of WHO’s Primary Health Care (PHC) approach with Community Participation (CP) for delivery of basic health care service. Even though it has struggled with its implementation because of developmental challenges such as poverty, civil war, geography etc., it is still important to understand CP and PHC to understand and mitigate such challenges because it is still an appropriate approach to provide health care service in Nepal.

Methods: In order to understand CP in PHC a qualitative case study method was applied in this research. Forty-eight semi-structured interviews and four focus group discussions (FGD) were conducted with 26 groups of grass root level and district level health systems actors in two VDCs of Sindhupalchok district of Nepal in 2014. We examined how these actors understand PHC and CP, how they participate in it and what motivates or hinders them to participate in PHC. The results are based on interviews, FGDs and observation.

Results: There was very minimum understanding about PHC and CP among actors in these VDCs. CP for these actors was a token participation which was limited to material contribution, voluntary labour and financial donation in PHC infrastructure development and maintenance. Health Facility Management Committee was the only mechanism of CP in PHC, which rarely represented the community. Decisions were imposed top down without considering local context, practices and involvement of local actors. Main motivations for CP were material benefit, social recognition and religious merits whereas geography, opportunity cost, lack of awareness and socio-cultural discriminations were barriers to participation.

Discussions / Conclusions: PHC with CP needs to be contextualized to accommodate, learn and benefit from the existing traditional health system. Similarly, a stronger policy measure is needed to minimize if not to eradicate the discrimination against gender, caste, ethnicity and poverty to increase CP in PHC which can be obtained to some extent by radicalizing the current approaches of addressing these issues. At the current socio political situation of Nepal, neither the government nor the nongovernmental and private sector alone are able to address the increased health care need. Therefore, a wider broad partnership based PHC with CP is recommended as a way forward to ensure basic health care service in Nepal. This has been even more important where reconstruction of the health system is underway after the devastating 2015 earthquake, for the community to feel ownership of local health system.
"Now we are talking of supportive supervision": findings from an intervention to improve the quality of community health worker supervision in Kenya

Co-authors: Robinson Njoroge Karuga, Lillian Otiso, Nelly Muturi, Maryline Mireku, Rosalind McCollum, Miriam Taegtmeyer, LVCT Health; Liverpool School of Tropical Medicine

Background: Supervision of community health workers (CHW) – known as Community Health Volunteers (CHVs) in Kenya - contributes to good performance, motivation and retention of these providers. However, inadequate supervision is a weakness in many community health programmes. The limited evidence base shows that supervision is perceived as controlling, fault-finding and primarily focuses on report collection, and there is little experience of how quality of supervision can be improved. Inadequate supervision may be due to capacity gaps in knowledge and lack of supervision tools.

Methods: Action research aimed at improving the quality of supervision by training supervisors of CHWs on supportive supervision and provided them with supervision checklists. Training was conducted in March 2015 in Nairobi and Kitui counties of Kenya. 61 supervisors, comprising sub-County Community Health coordinators, Community Health Extension Workers (CHEWs) and CHV team leaders, were trained on supportive supervision, focusing on educative, administrative and supportive components, non-judgemental problem solving and advocacy using a experiential and participatory approaches. This six-day training was adopted from the Kenyan supportive supervision curriculum for community-level HIV service providers. Supervision activity questionnaires were administered to supervisors twice to assess changes in frequency and approaches to supervision after the training. 16 Qualitative interviews were conducted with CHVs and their supervisors to explore perspectives and experiences with supervision. Data on supervision were collected before the training and six months after. Researchers observed supervision sessions to assess how supervisors implemented the skills covered in the training and documented in an observation sheet. Qualitative and quantitative data were analyzed in Nvivo and SPSS, respectively.

Results: Following training, the focus of observed supervision sessions shifted from controlling and administrative approaches to coaching, mentorship and problem-solving, i.e. supportive supervision. Group supervision was the most common approach by CHV team leaders and CHEWS. There was also an increase in the frequency of supervision. All CHV team leaders reported conducting a median of three supervision sessions six months after the training, compared to one session at baseline. All supervisors and CHVs reported the intervention was helpful and it responded to capacity gaps in supervision and sharing structured feedback.

Conclusion: This intervention responded to capacity gaps in supervision and was attributed to enhanced supervision capacity of supervisors and increased frequency of supervision. Supervisors found the
curriculum acceptable and useful in improving their skills. This intervention demonstrated the importance of scaling up training in supervision and on-going support to supervisors of CHWs.
Dan Kaseje, Great Lakes University of Kisumu, Kenya
Abstract ID: 504

A MODEL FOR SUSTAINABLE EVIDENCE BASED POLICY ENGAGEMENT IN KENYA: KEY ACCELERATORS, THE TROPICAL INSTITUTE OF COMMUNITY HEALTH LONGITUDinal CASE STUDY

Co-authors: Dan Kaseje, Great Lakes University of Kisumu

Policy is a statement of direction that should result from a decision-making process that applies reason, evidence and values. This work has been done spanning a period of more than ten years and thus surfaces many intricacies of research to policy engagement. The work was undertaken by the School of Public Health of Great Lakes University of Kisumu Kenya.

The Institute was established in 1998 to offer graduate courses in Public Health but with the aim of making a meaningful contribution to health systems strengthening and health outcomes improvement in a region that had had extremely poor health indicators for decades. The Institute developed a model of Public Health training which places students and their lecturers in service delivery and management practice contexts in partnership with the Ministry of Health and communities, applying knowledge and skills obtained through learning processes. The methodology involved literature review, documentation of processes of collaborative research, policy dialogue involving researchers, policy makers and their ities, based on a longitudinal case study approach.

Methodology: This was a longitudinal case study that started in 2001 and continued to 2013. The first phase the researchers and communities were engaged in research while policy makers played an advisory role, in the second phase policy makers became co-investigators in research and in the third phase the policy makers took over the leadership of the research process with the researchers playing advisory and quality control roles. The longitudinal nature of the case study enabled research to sustain collaborative engagement by permitting relevant adjustments to meet the diverse and changing needs of the stakeholders.

As a result the Ministry of Health adopted the CBHC model after twenty five years of researchers demonstrating the effectiveness of the model, but using the "push" approach. The researchers accompanied the implementation process to guide modifications to the policy guidelines that became necessary as it was implemented. The research process influenced the creation of a Technical Working Group on operations research as a structure within the MOH to strengthen the engagement of research teams in the policy cycle, being embedded in the policy making structures of the MOH.

Conclusion: The study concludes that collaborative research involving policy makers, communities and researchers is possible and effective in influencing policy. study provides an example of how to strengthen a country’s health system by engaging stakeholders for improving health outcomes and influencing policy.
Dyness Kasungami, John Snow Inc., United States
Abstract ID: 3189


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Background: Most countries in sub-Saharan Africa have now adopted integrated community case management (iCCM) of common childhood illnesses as a strategy to improve access to case management beyond health facilities. In March 2014, the iCCM Task Force published an Indicator Guide for Monitoring and Evaluating iCCM: a “menu” of recommended indicators with globally agreed definitions and methodology, to guide countries in developing robust iCCM monitoring systems. The Indicator Guide was conceived as an evolving document that would incorporate collective experience and learning as iCCM programs themselves evolve. Two studies examined the feasibility of collecting the Indicator Guide’s 18 routine monitoring indicators with the iCCM monitoring systems that these countries currently have in place.

Methods: We reviewed iCCM monitoring tools, protocols, and reports from a purposive sample of ten countries in sub-Saharan Africa. Documents were collected in-person or remotely from key informants, with follow-up interviews for verification. We developed a scorecard system to assess which of the Indicator Guide’s 18 routine monitoring indicators could be calculated with the given monitoring tools, and at which level of the health system the relevant information would be available.

Results: We found that the data needed to calculate many of the Indicator Guide’s routine monitoring indicators are already being collected through existing monitoring systems, although much of these data are only available at health facility level and not aggregated to district or national levels. We also found that the data is collected using many forms imposing a high burden on the providers of iCCM. Our results also highlight the challenges of using supervision checklists as a data source, and the need for countries to maintain accurate deployment data for CHWs and CHW supervisors.

Conclusion: Strengthening routine monitoring of iCCM requires that data on cases managed are collected and reported separate from cases managed at facility. In the countries reviewed, a lot of data are collected. We suggest that some of the iCCM Task Force recommended indicators need revising. Routine monitoring will be more feasible, effective, and efficient if iCCM programs focus on a smaller set of high-value indicators that are easy to measure, reliably interpreted, and useful both for global and national stakeholders and for frontline health workers themselves. In addition, it will be easier for iCCM program managers to advocate including a few iCCM specific indicators in the electronic District Health Management Information System than a long list of indicators limited value.
Isabel Kazanga, Malawi College of Medicine, Malawi
Abstract ID: 1059

**Equity of Access to Essential Health Package in Malawi: A Perspective on Uptake of Maternal Healthcare**

Co-authors: Isabel Kazanga, Alister Munthali, Hasheem Manaan, Malcom Maclachlan, Malawi College of Medicine; Center for Social Research, University of Malawi; Trinity College Dublin, Ireland

**Background:** Equity of access to healthcare is a central public policy issue, yet it remains a challenge for many health systems globally. In 2002, Malawi adopted the Essential Health Package (EHP) as a strategy to improve universal access to healthcare. EHP refers to a prioritized set of basic health services that focus on major causes of morbidity and mortality, especially those affecting vulnerable populations. This research assessed equity of access to EHP in Malawi focusing on uptake of maternal healthcare services (antenatal, delivery and postnatal care). Results of this study will help to improve delivery, utilisation and access to EHP services besides serving a basis for policy decision making.

**Methods:** The study employed a “mixed methods” research design using quantitative and qualitative methods. The quantitative component used data from 2010 Malawi Demographic and Health Survey. Multivariate logistic regression was used to determine predictors of maternal healthcare utilisation. Gini coefficient analysis was done to measure the degree of inequalities in use of maternal healthcare. The qualitative component employed in-depth interviews and Focus Group Discussions with women and key informants.

**Results:** Use of skilled ANC is very high. However, utilisation of skilled care drops during delivery and postnatal care. Multivariate logistic regression identified women’s residence (p<0.05), education (p<0.01) and wealth (p<0.05) as independent predictors of skilled maternal healthcare. Gini coefficient analysis detected a high degree of pro-rich inequalities for use of ANC (Gini Index: 0.35). Qualitative analysis revealed that supply and demand factors such as lack of knowledge, poor quality services, long distance to health facilities, shortage of skilled health workers affect access to maternal services. Results also show that EHP has helped to improve healthcare coverage, access, population health and strengthening the health system. However, lack of awareness about EHP among stakeholders, inadequate resources, lack of EHP policy enforcement and effective monitoring and evaluation systems constrain delivery of EHP.

**Conclusions:** EHP strategy is key to addressing inequalities in healthcare access and achievement of the SDGs. Emphasis must be placed on addressing structural and behavioral barriers to promote universal access to EHP services. Targeted strategies such as promoting community awareness, improving distance to health facilities, delivery of integrated quality services and application of a multi-sectoral approach to address socio-economic determinants of health would help promote equitable access to EHP services.
Aschenaki Kea, REACH Ethiopia, Ethiopia
Abstract ID: 2427

Factors Influencing motivation of Community Health Workers: The Case of Ethiopia Health Extension Workers: A qualitative study

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Abstract Background: Countries are turning to strengthen programs involving community health workers to tackle the challenge of human resource shortage for health. In 2004 Ethiopia introduced health extension program (HEP) comprising a package of basic community health services. The HEP run by a cadre of female health extension workers (HEWs) recruited from community and trained for one year. This study aimed at identifying factors influencing motivation and performance of the HEWs on maternal health in order to introduce quality improvement interventions. Methods

The study was conducted in six districts of Sidama Zone, South Ethiopia. We employed an explorative qualitative study design involving 14 focus group discussions (FGDs) and 44 in-depth interview (IDIs) with HEWs, health professionals, HEP managers and community members. Transcripts were imported to a qualitative data management software (Nvivo 10) and coded using open coding combined with a pre-defined framework. The coded transcripts were analyzed and summarized in narratives for each theme.

Result: Commitment for serving the community, seeing positive result or healthy behavior of the community and the interest to be called as "HEW" were intrinsic forces derived the HEWs to join the HEP and were reasons for continuing working as a HEW. Recognition (as word of mouth) of the community and the support of recently introduced voluntary based community health system: health development army (HDA) were mentioned by majority of the HEWs as community related motivating factors. Most of the HEWs mentioned to be motivated by supervisory visit of district health office and health center. Lack of logistics, career advancement and educational opportunity, transfer, low salary (compared with workload and other government employees), workload (not supported by co-worker and introduction of new activities) were health system factors influencing motivation of the HEWs. Engagement in activities outside of job description, serving large population covering wide geographical area and lack of basic facilities (water and electricity) were contextual factors affected the motivation of HEWs. Conclusion

The motivation of the HEWs found to be affected by intrinsic, community, health system and other contextual factors. The finding of this has been used to introduce quality improvement intervention to improve motivation and performance of the HEWs in order to improve utilization of maternal health services. It will also inform managers and policy makers to design interventions at health system level and beyond.

Key words: Community health workers, health extension workers, motivation, Ethiopia.
Fatou Kébé, ACDEV, Senegal
Abstract ID: 1250

Les obstacles et les facteurs facilitant l’accès des jeunes vivant avec un handicap (JVH) aux services de santé sexuelle et reproductive (SSR) au Sénégal

Co-authors: Fatou Kébé, Eva Burke, Alex Le May, Ilse Flink, ACDEV; ASK

Contexte: De récentes initiatives ont cherché à donner la priorité aux jeunes dans les politiques et conventions relatives à la santé sexuelle et reproductive (SSR) au Sénégal. Des engagements ont été pris pour défendre les droits sanitaires des personnes vivant avec un handicap (Article 17 de la constitution). Toutefois, la recherche sur l'utilisation des services SSR chez les jeunes vivant avec un handicap (JVH) est négligeable. Notre étude a exploré les priorités de la SSR pour les JVH, les vulnérabilités clés et l'accès aux services y compris les préférences et les obstacles pour accéder à ces services.

Méthodes: 17 groupes de discussion et 50 entretiens individuels ont été menés avec les JVH à mobilité réduite ou ayant un handicap visuel ou auditif âgés de 18 à 24 ans à Dakar; Kaolack et Thiès. Une approche par les pairs a été utilisée pour la collecte et l'analyse des données.

Résultats: Il a été noté une faible connaissance et utilisation des services SSR chez les JVH. Ils étaient dépendants pour accéder aux services SSR, ce qui entrave la confidentialité. L'utilisation des méthodes contraceptives était relativement limitée aux préservatifs. De multiples cas de viol ont été révélés chez les femmes ayant un handicap auditif. Les principaux obstacles à des services SSR pour les JVH étaient: les obstacles financiers, les attitudes des prestataires/parents et l'accessibilité (liés à leur handicap). L'étude a révélé peu ou pas l'utilisation de stratégies SSR existantes et spécifiques pour les jeunes au Sénégal. En outre, aucune mention de l'accès à la nouvelle initiative des services de santé gratuits pour les personnes handicapées (cartes d'égalité des chances) n'a été faite.

Conclusions: L'âge et le handicap sont des contraintes pour les JVH d'accéder aux services SSR. Les femmes JVH sont plus confrontées à des contraintes, en liaison avec les normes sociales (préervation de la virginité jusqu’au mariage). Les interventions pour accroître l’accès aux services doivent prendre en compte les obstacles spécifiques aux handicaps et les normes de genre. La récente initiative nationale consistant à introduire la gratuité des soins pour les personnes handicapées; doit être accessible/ appropriée pour les JVH, mais aussi devrait être subventionnée au niveau du privé. De plus amples recherches sur les personnes vivant avec un handicap sont nécessaires afin d'explorer le poids de la violence sexuelle, le rôle des prestataires dans l’accompagnement des cas de viol, les déterminants de l'utilisation ou non des méthodes contraceptives par les JVH.
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Abstract ID: 1580

The West African experience of promoting collaboration between researchers and decision-makers through steering committees to enhance the use of health research evidence

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Abstract: In a bid to strengthen collaboration between researchers and policy makers in West Africa, the West African Health Organization (WAHO) and the International Development Research Centre (IDRC) of Canada, developed the project "West African initiative for strengthening capacities through health systems research". This initiative aims to promote the use of research evidence through the facilitation of steering committees of four health systems research projects. This study was conducted to describe the process of establishing these steering committees. Its findings would help other stakeholders to adopt a similar approach in promoting collaboration between researchers and health policy makers.

Methodology: This is a cross-sectional qualitative study based on four IDRC-sponsored projects in Burkina Faso, Nigeria, Senegal and Sierra Leone. Literature and project documents were reviewed and semi structured interviews conducted with 13 members of the steering committees, the research teams, WAHO and IDRC staff. The respondents were selected purposively using a data saturation method based on their expertise or position in the regional project. Data was analyzed using thematic content analysis by simple categorization.

Results: The idea to establish such committees was suggested by WAHO-IDRC and their technical experts. To establish the steering committee in each country, the research team identified potential members, who were then introduced to the respective national health authorities. Membership of these committees was voluntary and multi sectoral, and included researchers, health professionals, civil society organizations, and health policy makers and was made up of between 10 and 23 men and women, depending on the country. The research teams organized meetings with the selected members, after which the authorities were asked to formalize and officially inaugurate the steering committee, with the mandate to provide technical assistance to researchers, and to facilitate knowledge transfer and use of research results. Each committee met at least two times a year to decide on its agenda and review the progress of the project. All in all, the committee is said to have facilitated the implementation of the projects.

Conclusion: This WAHO-IDRC initiative offers the opportunity to promote effective collaboration between researchers and policy makers and should contribute to strengthening health systems and improving evidence to policy process in West Africa. The involvement of WAHO as a regional health institution, leadership of the researcher as well as the commitment of the national health authorities
and members of the steering committees, are the main factors that would ensure the success of this initiative.
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Abstract ID: 2360

**Effet de l’exemption du paiement de la prise en charge du paludisme simple chez les enfants de moins de 5 ans au Cameroun**

Co-authors: Louise Kengne, Bertrand Feudjio, Pierre Ongolo, Research for Development International; Université de Ngaoundéré; Université de Douala


Méthodes: Une méthode mixte concurrente de recherche utilisant des données de séries chronologiques recueillies en Juillet 2011 et Avril 2012, et des données qualitatives recueillies en Avril 2012 a été réalisée. L’analyse du contenu a été utilisée pour les données qualitatives. Pour les données quantitatives, un proxy a été utilisé pour mesurer les standards de vie par le calcul d’un indice composite en utilisant une analyse en composante principale.

Résultats: Les consultations externes générales et des enfants de moins de cinq ans ont augmenté d’environ 10% au cours de l’année 2011 par rapport à l’année 2010 (avant la politique). Le nombre moyen de consultations pour les cas de paludisme simple chez les enfants de moins de 5 ans a augmenté dans les mois suivant le lancement de la politique et à commencé à diminuer à partir de Septembre 2011. La proportion des enfants de moins de cinq ans exemptée du paiement des médicaments a augmenté de 19,6% à 32,9% à 4 et 12 mois après la mise en œuvre de la politique. En revanche il n’y a eu aucun effet dans la réduction des inégalités entre les groupes socio-économiques: les zones rurales et les ménages les plus pauvres bénéficient moins de la mesure d’exemption (RR respectivement 2.7, 1.6). Deux tiers des enfants qui ont utilisé les services de santé pour le paludisme simple ont payé en moyenne 2940 FCFA (6 $ USA) pour le traitement. La majeure partie de ce coût était faite sur l’acquisition de la thérapie à base d’artémisinine (1680 FCFA / 3,5 $ USA).

Conclusion: La politique à amélioré l’utilisation des services de santé, cependant, elle n’a pas réussi à réduire les inégalités entre les groupes socio-économiques. En outre, le coût informel persiste pour les patients. Il y a un besoin urgent d’améliorer la mise en œuvre de la politique afin de maximiser ses bénéfices, en particulier parmi les populations rurales et les plus pauvres.
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Abstract ID: 3038

Converting’: health workers and decentralisation of molecular diagnostics for tuberculosis: the case of GeneXpert in South Africa

Co-authors: Karina Kielmann, Kerrigan McCarthy, Institute for Global Health & Development, Queen Margaret University, Scotland; National Institute for Communicable Diseases, Johannesburg, South Africa

Background: GeneXpert MTB/RIF (aka Xpert), a fully-automated rapid diagnostic testing technology to detect drug-resistant strains of tuberculosis (TB), was rolled out in South Africa from 2011 alongside a broader move to decentralize care for drug-resistant TB. This paper seeks to understand the socio-technical relations at play in converting the machinery of Xpert into a meaningful working practice in primary care clinics in South Africa.

Methods: Data stems from 41 semi-structured, in-depth interviews conducted in 2014 with sub-district TB co-ordinators, facility managers, TB nurses, general primary care nurses and community health workers in 8 South African primary care facilities. The clinics were purposively selected from 40 clinics participating in the XTEND trial comparing Xpert with smear microscopy for TB diagnosis. Interviews explored informants’ perceptions of the test and its efficacy as a diagnostic intervention, their decision-making and agency with regards to the diagnostic algorithm, and the extent to which Xpert fit into collective lore and working practice.

Results: Health care workers’ (HCW) ownership and routine use of the algorithm to request an Xpert test was variable, and dependent on four factors: (1) perceived legitimacy of Xpert, based on what HCW felt was the most pressing issue for patients (rapid diagnosis versus improving access to care); (2) perceived workability of the test, that is, the extent to which the diagnostic algorithm fit into existing working practices; (3) availability of supportive resources - both material and human - to sustain the logic of Xpert implementation and (4) functionality of an intact communication system across levels of care, which was not always in place.

Discussion/Conclusion Early critics of the vertical, large-scale distribution of GeneXpert machines to the periphery have argued that integration of this testing technology requires a diagonal, systemic approach that takes processes and people into account. However, despite the appeal for stronger operational, quality assurance, and referral systems in place, minimal attention has been paid to the impact of decentralized power and expertise on health workers tasked with implementation. Our paper argues for the importance of a socio-technical approach that takes context-bound legitimacy, working culture, and communication practices in account when assessing the introduction of new technologies in low-income health settings.
Pourquoi le financement basé sur les résultats au Tchad s’est-il arrêté après la phase pilote ?

Co-authors: Joël Arthur Kiendrébéogo, Abdramané Berthé, Mahamat Béchir, Lamoudi Yonli, Centre MURAZ; Centre de Support en Santé Internationale (CSSI), N'Djamena, Tchad


Méthodes: Notre recherche était une étude de cas descriptive et analytique, avec collecte de données de nature qualitative. Cette collecte s’est effectuée à partir d’une revue documentaire et auprès de 32 informateurs-clés. Des cadres théoriques d’analyse des politiques de santé ont été utilisés, notamment le triangle de Walt et Gilson et le modèle de mise à l’agenda de Kingdon. Leur exploitation a permis d’expliquer le contexte politique, sanitaire et social de l’implantation du projet, les arrangements institutionnels en place et le rôle joué par les acteurs-clés du système de santé.

Résultats: La pertinence du FBR comme stratégie pouvant contribuer à résoudre les problèmes structurels et conjoncturels du système de santé tchadien, et notamment à améliorer la santé du couple mère-enfant, ne semble pas être remise en cause par les différents acteurs. Pourtant, malgré l’existence de nombreuses fenêtres d’opportunité, le FBR n’a pas pu passer de l’agenda gouvernemental (‘governmental agenda’) à l’agenda décisionnel (‘decision agenda’) à l’issue de sa phase pilote. Les raisons d’une telle situation semblent être le fait que les aspects techniques de la mise en œuvre du projet ont pris le pas sur les aspects politiques. En effet, il a manqué une bonne appropriation nationale et un « entrepreneur politique » pour réellement le porter.

Conclusion: Notre étude rappelle, au-delà du Tchad, la nécessité de mener des analyses d’économie politique approfondies et contextuelles avant l’introduction, dans le système de santé, d’interventions complexes voire réformatrices. Cela renforcerait alors les capacités d’anticipation du système et faciliterait la mise en œuvre effective et efficace de ces interventions, au-delà de la rhétorique de la reconnaissance de leur pertinence.
Rethinking the role of educational institutions as policy think tanks- Proposing A way forward.

Over the past decade, there has been a drive to promote the uptake of the enormous research outputs into policy and practice. Educational institutions, which routinely conduct research, have been fronted as reputable organs to promote this. This has come with several initiatives from global partners to build capacity and support educational institutions to engage in policy influencing activities. However, these efforts have not yielded the expected benefits in terms of policy influence at both national and global levels. In order to appreciate the potential of educational institutions to contribute to policy influence, there is need to critique the nature of universities, their mandates and experiences in order to inform strategies to enhance their ability to influence policy in future.

This work draws on experiences from 6 African Universities, which have benefited from research and capacity building funding aimed at influencing policy. The study looked at how and who influences policy at national level, which capacities exists for educational institutions to influence policy and experiences from these six institutions to propose a way forward.

Methods: A survey and in-depth interviews with researchers who had practiced for at least 10 years across six schools of public health African universities were conducted. A reflexive learning study based on researchers from 6 African universities.

Findings: Several factors moderate the ability of institutions to engage in policy influencing. Externally driven funding, narrow research focus to influence policy, status of university, focuses on academic benchmarks including the PhD approach does not facilitate KT.

Internally- The mandate of universities, capacity of researchers, culture of dissemination, dissonance between researchers and policy makers, lack of research agendas (agendas not policy driven), turnover of policy makers, crowded policy process demands (perceived costly and futile by researcher). External ranking influences what universities focus on.

Opportunities- Basing decisions on hard evidence is increasingly pushed, more researchers and policy makers partnerships have been built all more aware of KT, more funds available for policy engagement, use of other experienced, eager mandated think tanks.

Conclusions, way forward: Supporting educational institutions to influence KT will require a shift from mainly academic focus, and the academic way of doing things driven first externally then internally. Global ranking on the basis of policy influence, KT products, and not just scientific publications is key.
Research agendas developed in tandem with policy makers. Developing framework for assessing policy influence at funding and researcher (university) level.
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Abstract ID: 3398

**Mentorship capacity building using a facility cascade model: effect on quality of intrapartum care in three districts in eastern Uganda.**

Co-authors: Suzanne Kiwanuka, Judith Ajeani, John Bua, Moses Tetui, Elizabeth Ekirapa Kiracho, Makerere University School of Public Health; Mulago National Referral Hospital

Rationale: Mentorship is the deliberate pairing of a more skilled person with a lesser skilled one, with the agreed-upon goal of imparting skills to the less experienced person. Effective mentorship has often been constrained especially in resource limited settings. Since 2014 an intervention study in eastern Uganda has supported 6 experienced external mentors to build the capacity of internal mentors and to provide mentorship to health workers in 6 high level facilities with a plan to cascade to lower facilities across the districts. The purpose of this study was to assess the extent to which a cascade model of mentorship can lead to improvements in intrapartum care quality.

Methods: Health workers in six high level facilities in three districts (Kamuli, Kibuku, Pallisa) initially received 18 mentorship visits. The trained mentees later mentored HWs in six lower level facilities. In each district 12 internal mentors were initially mentored by a team of MNH specialists (external mentors) to upgrade their MNH skills. Mentoring included: newborn resuscitation, monitoring labour, identifying danger signs in mothers and newborns. Mentees were expected to keep a record of the skills they attained in a mentee diary. Thirty six , two day mentorship visits were conducted over one year with internal mentors moving to six lower level facilities after the first six months with the plan to cascade this practice to other lower facilities.Data from the district and mentor reports was analysed for effect on intrapartum care, lessons and challenges.

Results: More than 42 internal mentors across twelve health facilities had their capacity built. Quality outcomes: Blood pressure recording during the intrapartum period was improved and sustained above 70%. Partograph use for monitoring labor increased to more than 70% from 0% in all mentored facilities.Partograph use improved labor monitoring and referral practices. Health workers reported an increase in motivation due to improved teamwork, continued medical education and managerial skills development opportunities.Poor record keeping by mentees constrained close monitoring of HW professional growth. Limited time for mentorship visits and associated costs for external mentors posed a challenge. Conclusion: Mentorship contributes to quality improvement during intrapartum care by providing an avenue for supporting critical thinking, health worker motivation and strengthens teams. Mentorship can be sustained by increasing the core mass of mentors within the districts and preferably tagging mentors to facilities with targets for performance management and professional growth. External support from more experienced mentors is crucial.
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Abstract ID: 1668

Optimizing the benefits of Community Health Workers’ unique position between communities and the health sector: a comparative analysis on factors shaping relationships in four countries

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Background: Community health workers (CHWs) have a unique position between communities and the health sector. The strength of CHWs’ relationships with both sides influences their motivation and performance. Optimal performance of CHWs contributes to the quality of frontline health services, which are essential for building resilient and responsive health systems. This qualitative comparative study aimed at understanding similarities and differences in how relationships between CHWs, communities and the health sector were shaped in different Sub-Saharan African settings.

Methods: The study was conducted in Ethiopia, Kenya, Malawi and Mozambique. Focus group discussions (48) and interviews (154) were undertaken with CHWs, their supervisors, managers and community members. Perspectives on factors influencing performance of CHWs and relationships between CHWs, communities and the health sector were collected. Generic topic guides were developed based on existing evidence from the literature, adjusted to the country contexts. The data were recorded, transcribed, translated, coded and thematically analysed. A comparative analysis with a “realist lens” was conducted, identifying which mechanisms, in which contexts, led to either trusting or weak CHWs’ relationships with actors in communities and the health sector.

Results: The study demonstrated a complex interplay of factors influencing trust, and thereby the strength of relationships, between CHWs, their communities and actors in the health sector. Mechanisms influencing relationships were feelings of (dis)connectedness, (un)familiarity, self-fulfilment and serving the same goals, and perceptions of received support, respect, competence, honesty, fairness and recognition. The broader context and the CHW programme context in which these mechanisms took place were identified. For example, the socio-economic situation, the history and value of community participation and volunteerism, or the role of traditional leaders were found to influence relationships in certain contexts. The programme context, e.g. selection and recruitment systems, extent of task-shifting, volunteering and mode of supervision, was also influencing relationships. Sometimes, constrained relationships between CHWs and the health sector resulted in weaker relationships between CHWs and communities.

Discussion and conclusion: The findings contribute to global and national efforts to optimize CHW programmes and achieve universal health coverage. Policy makers and programme managers should take into account the broader context and could adjust CHW programmes so that they trigger mechanisms that generate trusting relationships between CHWs, communities and other actors in the health system. This can contribute to enabling CHWs to perform well and enhance resilience and responsiveness of health systems.
Adam Koon, London School of Hygiene and Tropical Medicine, United Kingdom
Abstract ID: 3312

**Framing Health Policy and Systems Research: An introduction to frame-critical policy analysis and application to Kenya**

Co-authors: Adam Koon, London School of Hygiene and Tropical Medicine

This presentation will introduce audience members to a new form of policy analysis and illustrate its potential utility in health policy and systems research. This presentation will orient listeners to the field of framing research via a recently conducted scoping review of framing in health policy research. It will then illustrate the utility of such an apporach by sharing findings from a recent interpretive framing analysis in Kenya. Finally, the presentation will identify potential applications for future research. Framing research seeks to understand the forces that shape human behavior in the policy process. Frames provide the cognitive means of making sense of the social world and conflicts among them underlies policy contestation. Framing, as both theory and method, has generated considerable insight into the nature of policy debates. Despite its salience for understanding health policy debates; however, little is known about the ways frames influence the health policy process. We present findings from a scoping review which used a standardized review framework. The literature on framing in the health sector was reviewed using nine health and social science databases. Articles were included that explicitly reported theory and methods used, data source(s), at least one frame, frame sponsor, and evidence of a given frame’s effect on the health policy process. A total of 52 articles, from 1996 to 2014, and representing 12 countries, were identified. Much of the research came from the policy studies / political science literature (n=17) and used a constructivist epistemology. The term “frame” was used as a label to describe a variety of ideas, packaged as values, social problems, metaphors, or arguments. Frames were characterized at various levels of abstraction ranging from general ideological orientations to specific policy positions. Most articles presented multiple frames and showed how actors advocated for them in a highly contested political process. Framing is increasingly an important, yet overlooked aspect of the policy process. Findings from Kenya illustrate how actors engage in sense-making, naming, and storytelling in ways that frame actors, policy issues, and the policy process itself. Further analysis on frames, framing processes, and frame conflict can help researchers and policymakers to understand opaque and highly charged policy issues, which may facilitate the resolution of protracted policy controversies.
Anticipating change for a more resilient health system in Ukraine: A study of the cost-effectiveness of integrating HIV counseling and testing into primary health care


Background: Ukraine's HIV prevalence (1.2%) is the highest in Europe. Of the 290,000 people living with HIV (PLHIV) in 2014, 138,000 were registered for HIV care in January 2015, indicating that many PLHIV are not aware of their status and the difficulty of bringing PLHIV into care.

HIV counseling and testing (HCT) in Ukraine is not integrated into the general health system, but administered through specialized AIDS Centers and Trust Cabinets. Arguments against integration include a desire to protect donor-funded HIV programs and presumption that most-at-risk-populations (MARP) would be deterred by stigma from receiving care in the general health system. However, separation of HCT and care may stigmatize these services, foster a reliance on donor funding, and result in disconnection from other health services.

Ukraine faces multiple crises, and government and donor expenditures are decreasing. Increased access to HCT in Ukraine will require technically and culturally acceptable models of HCT delivery that are cost-effective.

Methods: The objective was to estimate the number of HIV cases diagnosed, costs, and cost per HIV case detected associated with integrating HCT into primary health care (PHC) facilities in Ukraine. The design was a difference-in-difference observational design with four districts implementing the intervention compared to 20 districts where HCT were offered only at specialized HIV clinics (‘Trust Cabinets’). The study was conducted in PHC facilities and Trust Cabinets in Chernigiv Oblast, Ukraine. The research team collected cost data from donor-purchased supply receipts, government expenditure records, and secondary data on patients receiving HCT and the test results.

HCT supplies and training were provided to staff working at PHC facilities early in 2014. Outcome measures included the number of HIV cases detected, the cost of the intervention, the incremental cost per HIV case detected, and the patient profile of those receiving tests.

Results: There was a 2.01 times (95% CI: 1.12 to 3.61) increase in the number of HIV cases detected per capita in intervention districts compared to other districts. The incremental cost of the intervention was $21,017 and the incremental cost per HIV case detected was $369. The average cost per HIV case detected before the intervention was $558. In uncertainty analysis, the incremental cost per HIV case detected ranged from being cost-saving to $681.

Conclusions: Engaging PHC facilities to provide HCT is likely desirable from an efficiency point-of-view. However, the affordability needs to be assessed because expansion will likely require additional investment.
Manso Koroma, West African Health Organization (WAHO), Burkina Faso
Abstract ID: 2274

Quality of antenatal care in rural Sierra Leone prior to the ebola outbreak

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Background: WHO promotes the focused antenatal package in developing countries as a key intervention towards reducing maternal deaths. Antenatal attendances increased after the Government of Sierra Leone abolished user fees in 2010. There are no studies that have examined the quality of antenatal services in health facilities.

Methods: A cross sectional survey was conducted between March and April 2014 in all 97 public and missionary peripheral health facilities and 3 hospitals in Bombali District, Northern Region, just before the ebola outbreak was declared in Sierra Leone in May 2014. Bombali was one of the most heavily affected district during the epidemic. Consenting 100 antenatal providers were interviewed and 276 observations made of antenatal providers in the clinic. All 486 pregnant women who attended antenatal clinic on the day of the survey in the sampled health facilities were interviewed.

Results: We found that only 1% of facilities had all the essential functional components in place to deliver services and there were 50% staff vacancies. Antenatal uptake was high but the quality of care was poor. Women reported at least one visit (92%) and 79% attended at least 4 or more visits (79%). However, based on criteria developed by the Ministry of Health, 9% of those who attended at least 4 times received good quality antenatal care whilst 16% of women received moderate quality of care. Of the women who attended for the first time only 8% received good quality antenatal care.

Conclusions: Although antenatal coverage was high the quality of antenatal services was substandard, indicating how weak the health system was prior to the Ebola outbreak. The undue attention given to measuring coverage may prevent the health sector from focusing on the quality of antenatal interventions provided to women that has a greater bearing on improving maternal health. These findings suggest that both coverage and quality should be closely monitored and the health sector needs to urgently invest more resources in the free health care initiative towards achieving its goal of reducing the high maternal mortality ratio.
Neeraj Kumar, CARE India, India
Abstract ID: 1520

Public Private Partnership model to improve access to dialysis services in a resource constrained province of Bihar, India

Co-authors: Neeraj Kumar, Hemant G. Shah,

Background: Bihar, one of India’s largest and poorest states, has a population of more than 110 million with poor health indicators and public health infrastructure. Chronic kidney disease is a major health issue. In India, there are an estimated 2.2 million new cases of end stage kidney disease every year, with 200,000 cases occurring in Bihar alone, of which an estimated 10,000 people die of this disease each year. There are few haemodialysis services available, and those private facilities that exist are quite costly. Therefore, in 2014 the state Government decided to establish a Public Private Partnership (PPP) with the key objective of providing access to high quality haemodialysis facilities at an affordable rate.

Methodology: The Bihar Technical Support program, funded by the Bill and Melinda Gates Foundation and supported by CARE, is providing technical support to strengthen the state Government in providing quality health services in Bihar. We examined the design and implementation of a unique PPP model, to identify key features that facilitated success of this model in improving access to quality services.

Results: The review of the PPP model showed that defining clear responsibilities of both parties was important to the success of the process. The private partner provided state of art machines, consumables, and trained manpower, while the Government provided electricity, water supply, and adequate space within the premises of the medical colleges and District hospitals. Second, strict timeframes, clear milestones, and penalty mechanisms were put in place to ensure adherence to the contract. A timeframe of three months for establishment and operationalization of dialysis units was devised, with a penalty of 5% of the contract amount for failure to achieve that milestone. Finally, a strict monitoring regimen, with penalties for non-compliance, was put in place to ensure that the private provider adhered to the standard operating procedures (SOP) for maintaining a sterile dialysis unit. To increase utilization of the services, a print media campaign, as well as free “check-up” camps were organised jointly by both parties.

Conclusion: By including clear checks and balances in the contract and providing SOPs with strict monitoring mechanisms, the project has been able to start the operation of the facilities on time and is currently covering 70% of the population of the state. This successful effort of the Government to operate the dialysis services under a PPP model sets an example of a successful partnership in a resource constrained setting.
Meghan Kumar, Liverpool School of Tropical Medicine, United Kingdom
Abstract ID: 1240

Measuring motivation in close-to-community health workers: dynamic, multi-dimensional, and essential for resilience

Co-authors: Meghan Bruce Kumar, Ilias Mahmud, Frederique Vallieres, Robinson Karuga, Mohsin Sidat, Kingsley Chickaphupha, Ralalicia Limato, Malabika Sarkar, Hermen Ormel, Miriam Taegtmeyer, Liverpool School of Tropical Medicine; James P Grant School of Public Health; Trinity College; LVCT Health; Eduardo Mondlane University; REACH Trust; Eijkman Institute; KIT Royal Tropical Institute

Background: Close-to-Community (CTC) providers of healthcare are frequently promoted as a means to achieving universal health coverage. They offer a crucial link between patients/communities and ‘formal’ health systems, reaching people that would otherwise remain vulnerable. However, CTC healthcare programs tend to rely partially, or wholly, on a volunteer, intrinsically-motivated workforce who are expected to conduct their work for recognition. Low motivation levels and high attrition rates continue to present significant challenges for sustainability of CTC programs.

Methods: The REACHOUT Consortium is an international research project examining means of measuring and improving the quality of care provided at CTC level across six countries in Africa and Asia. We are using longitudinal mixed-methods to examine links between motivation of CTC providers and quality of care. Motivation was assessed quantitatively using an adapted version of the Motivational Outcome scale, which was validated across a sample of 741 CTC providers in four African (Ethiopia, Kenya, Mozambique and Malawi) and two Asian countries (Bangladesh and Indonesia) using confirmatory factor analysis. Each country also explored motivation and its multi-dimensionality through qualitative interviews with CTC providers, their supervisors, and higher-level health system staff.

Results: Measurement modelling approaches suggested a 12-item scale and confirmed a four-factor structure of Motivational Outcomes measuring: community commitment (two items), organization/team commitment (two items), satisfaction (four items), and conscientiousness (four items). We will present data on providers’ motivational outcomes across three years of REACHOUT in each country and triangulate those against the qualitative findings about motivation and its relationship to satisfaction, supervision, community engagement and other factors.

Discussion: REACHOUT provides a unique opportunity to measure motivation and motivational outcomes among CTC providers across contexts, with qualitative results illuminating the complex multi-dimensional, dynamic nature of motivation. The results will have implications initially for evaluating the current REACHOUT quality improvement interventions on motivation. More broadly, we hope the tools can be applied as a rapid means for programmers and others to measure motivation and improve CTC program design and provider retention in other settings.
Kassim Kwalamasa, Research for Equity and Community Health (REACH) Trust, Malawi
Abstract ID: 2380

Embedding quality supervision of community health workers at the local level in two rural Malawian districts.

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Introduction: Health surveillance Assistants (HSAs) in Malawi are a key close-to-community (CTCs) cadre providing health services at the local level with strong potential to strengthen health system resilience and responsiveness. However the effectiveness of the health services they provide is often hindered by poor supervision, high workload and uncoordinated vertical programmes. To address the challenges, we implemented a quality improvement intervention in two rural districts to improve coordination and supervision of HSAs. We used peer supervision approach (small groups of HSAs met every two weeks for supervision by a block leader, often a senior HSA) and larger group monthly supervision meetings facilitated by health centre level supervisors. This study evaluates the extent to which these approaches are embedded and owned at local level.

Methods: A range of complementary qualitative methods were conducted including: Programme Assessment Tool; in-depth interviews with HSA supervisors and key informant interviews with district health managers. Data was thematically analysed and triangulated with data from meetings with key officials from Ministry of Health (MoH).

Results: Peer and group supervision meetings were seen as a positive approach which could be easily sustained for regular supervision of HSAs. The burden on health centre level supervisors was lessened as block leaders managed some work previously managed by these supervisors. It was recommended that senior HSAs roles should be revised to focus solely on supervision rather than also conducting HSAs duties in their own catchment area. The peer and group supervision approach was perceived to improve coordination of different health services at community level. However some NGOs working through HSAs were contributing towards high workload for HSAs as they often introduced parallel supervision structures. Limited involvement of community members in monitoring HSA work was a gap in responsiveness of health services to community needs. Feedback from communities was often informal and irregular and occurred in response to particular problems. The MoH has produced a strategic framework to guide community health services, which includes supervision although this has not yet been fully operationalised. A National Technical Working Group to improve coordination of stakeholders working with CTC providers has been proposed.

Conclusion: There is potential to embed peer and group supervision approaches and improve supervision and coordination of HSAs at local and national level. This requires strengthening local level
inputs, such as community accountability structures and coordination of stakeholders to build health system resilience and responsiveness.
Aku KWAMIE, Ghana Health Service, Research and Development Division, Ghana
Abstract ID: 1880

**Postings and transfers in the Ghanaian health system: A study of health workforce governance**

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**BACKGROUND:** The practice of postings and transfers determines deployment and motivation of the health workforce – and ultimately, health system performance. Postings and transfers are the most basic of human resource management procedures, yet their function in health system governance remains little documented. This paper explores the formal policies and informal norms which govern postings and transfers in two rural districts in the Greater Accra Region of Ghana.

**METHODS:** A realist case study approach was employed. Phase 1 developed an initial middle range theory based on review of health workforce literature and relevant Ghanaian policy documents. Phase 2 undertook semi-structured interviews with 8 district managers and 87 frontline staff from district hospital, polyclinic, health centres and community outreach compounds in two purposively selected districts. Interviews sought to understand (1) how posting and transfer processes work, especially in rural areas where staff mal-distribution is particularly acute; (2) factors in staff and managerial decision-making; (3) personal experiences of being posted; and (4) issues related to study leave. Phase 3 refined the middle range theory through iterative data analysis. The study took place from December 2014-February 2016.

**RESULTS:** The majority of staff are young (in their late 20s), serving in their first post (less than 3 years) and predominantly female. Three main themes emerged from the data. First, there are two negotiation-spaces in the posting and transfer process: at regional and district levels. The regional-level interview is perceived by staff as being more favourable to their preferences. At district-level, staff choice tends not to prevail. Second, there is lacking clarity on the terms of service for transfer and study leave eligibility. A recent policy change in the number of years for study leave eligibility has resulted in confusion, hearsay, and distrust amongst staff. Third, while district managers and staff alike perceive postings and transfers to be unfair, staff appear to trust the regional-level more, whereas district managers view the regional-level as ‘interfering’ at times.

**CONCLUSIONS:** Postings and transfers are mediated by a complex web of broader policy, personal preference, and power dynamics. These findings point to tensions between regional and district control over staff which occur in an organisational culture of strong hierarchy. Harnessing greater understanding of the interactions between posting and transfer policies and the conditions which influence how postings and transfers are negotiated can strengthen the effectiveness of staff deployment and increase staff motivation, thus improving the responsiveness of health systems.
Guillaume Labrecque, International Rescue Committee, Kenya
Abstract ID: 2867

**Bulletin communautaire de performance en situation fragile et affectée par le conflit. L’expérience de l’IRC dans 151 structures sanitaires en République démocratique du Congo.**

Co-authors: Guillaume Labrecque, International Rescue Committee

**Contexte:** Depuis 2012, le programme Tuungane accompagne 151 structures sanitaires dans la mise en œuvre du bulletin communautaire de performance (BCP). Cette approche de redevabilité sociale assure un meilleur accès à l’information et crée un espace de dialogue entre les usagers et les prestataires de services.

**Méthode:** Le système de suivi et évaluation du programme génère deux types d’information. Le programme emploie l’approche du changement le plus significatif pour collecter des témoignages de changement. Le programme collecte aussi les notes attribuées par les communautés aux indicateurs contenus dans le BCP. Les 45 témoignages de changement ont été analysés à l’aide du logiciel Saturate. Les notes attribuées (à trois reprises sur une période de 12 mois) par approximativement 13,450 usagers en groupe de discussion ont été analysées à l’aide du logiciel Excel.

**Résultats:** Les deux sources de données permettent de relever trois résultats. Premièrement, la perception de la communauté et des prestataires quant à la qualité (usagers : 3.82/5; prestataires : 3.84/5), l’accès (u : 3.38/5; p : 3.16/5), la gestion conjointe (u : 3.57/5; p : 3.58/5) et l’équité entre les usagers (3.98/5; p : 4.19/5) est similaire et progresse au même rythme suggérant qu’ils peuvent se concentrer conjointement sur la recherche de solutions appropriée au contexte local plutôt que de devoir reconnaître d’abord l’existence d’un problème. Deuxièmement, la perception des hommes et des femmes est aussi similaire pour les quatre indicateurs standards (accès : homme: 3.08/5; femme: 3.08/5; qualité : h : 3.62/5; f : 3.65/5; gestion : h : 3.26/5; f : 3.23/5; équité : h : 4.06/5; f : 4.10/5) suggérant que les hommes et les femmes ont une perception similaire quant à la qualité des services. Troisièmement, les problèmes déclinés dans les plans d’action pouvant trouver une solution localement sont résolus. Cependant, les problèmes nécessitant des ressources et un soutien externe à la communauté sont rarement résolus durant la mise en œuvre du BCP.

**Analyses et conclusions:** Les résultats obtenus à l’aide du bulletin de performance suggèrent d’une part que les acteurs locaux perçoivent la qualité des services de manière similaire laissant donc supposer que ces acteurs peuvent immédiatement se concentrer sur la recherche de solutions aux problèmes identifiées. Cependant, il y a certains problèmes qui ne peuvent être résolus localement rappelant donc l’importance de coupler les approches de redevabilité sociale à des interventions systémiques.
Using Adaptive Management to Drive Effective Real Time Data Use in Global Health Programming

Co-authors: Anne LaFond, Mattias Wiklund, Paul Dowling, Soumya Alva, JSI

To address the complexity inherent in health system strengthening and facilitate responsive programming, many investors are experimenting with real time data (RTD) learning systems. The continuous cycle of real time data (RTD) collection and reflection empowers managers to identify gaps between program goals and expected outcomes, facilitating rapid, flexible responses to course-correct and improve program performance. This paper draws on three current experiences of the use of real time data learning approaches, critically analyzing the benefits and challenges of each strategy. The first is a health commodity management information system in Ethiopia that has improved real time data quality, access and use at scale. The second is an adaptive research, monitoring and evaluation strategy used in the Innovations for MNCH Initiative which combines traditional impact evaluation with periodic, in-depth process documentation using qualitative techniques to test the effectiveness of change pathways in program theories of change and facilitates adaptation of strategies to improve MNCH outcomes. The third is an electronic logistics management information system (eLMIS) in Tanzania that created end-to-end product flow visibility across 5,000 health facilities enabling a quicker policy response to commodity security challenges, reducing lead time and allowing for rapid, impactful decision making.

The purpose of paper is to engage program managers, researchers, and information system designers in critical reflection on the potential and actual use of real time data (RTD) learning systems for focused program or national system strengthening. As such this session will make a contribution to the ongoing discussions around use of data to improve the effectiveness of health programs and the resilience of health systems.

Co-authors: sha Lai, Xi’an Jiaotong University

Background: Rapid environmental, lifestyle and diet changes along with the urbanization may lead to an epidemic on chronic diseases in China. This study aimed to estimate the prevalences in chronic diseases among urban and rural aged 15 years and above in western China over the periods 2003-2013. Furthermore, this study also investigated the associations between socio-demographic characteristics and chronic diseases prevalences.

Methods: Three independent cross-sectional surveys were implemented in 2003, 2008, and 2013 in Shaanxi Province. A multi-stage stratified cluster random sampling method was used in each wave to collect representative samples in urban and rural regions, respectively. In total, 10568 residents in 2003 (49.5% urban), 15453 in 2008 (44.9% urban) and 48808 in 2013 (36.8% urban) were included in this analysis. Respondents self-reported doctor-diagnosed chronic diseases information in each survey. Poisson regressions with robust error variance analyses were used to calculate the adjusted prevalence ratios (PRs), so as to estimate the relative change in chronic conditions in 2008 and 2013, as compared to 2003.

Results: In 2013, 23.1%/22.4% of urban/rural residents reported having at least one chronic condition, increased from 17.0%/14.9% in 2008 and 12.8%/10.9% in 2003. Adjusted socio-demographic characteristics and health-related behaviors, the prevalence rates of chronic diseases remained significantly higher in 2013 than in 2003 (urban: PR, 1.63; 95% CI, 1.51-1.77; rural: PR, 1.44; 95% CI, 1.32-1.57). Among chronic diseases studied, the prevalences of hypertension and diabetes increased dramatically in a decade time. The prevalence of hypertension in 2013 more than triple since 2003, and that of diabetes increased nearly by three times in urban and approximately ten times in rural regions. Comparing to 2003, the increases in chronic disease happened mainly in the middle-aged (35–54 years) and elderly (≥65 years).

Conclusions: There was a significant and continuous increase in the prevalences of chronic diseases among urban and rural in western China from 2003 to 2013. Given the ageing and large population, China may take on a higher chronic diseases burden. A national chronic disease surveillance system and screening program could better acquire information about the distribution and tendency of chronic disease, and offer evidence for scientifically formulating of prevention and control actions.
Youwen Lai, Tibet Health Capacity Building Program, China
Abstract ID: 731

The Chinese hospital classification process as an entry point for improved hospital capacity in the Tibet Autonomous Region of China

Co-authors: Youwen Lai, Robert Power, Dawa Zhaxi, Amanda Benson, Dilibaer Yasen, Ruonan Chen, Hang Wang, Tibet Health Capacity Building Program; Burnet Institute; Tibet University Medical College; Burnet Institute

Purpose: A bilateral cooperation between China and Australia, the Tibet Health Capacity Building Program (2012-2017) (Tibet Health), aims to improve the health of the people of Tibet through better quality health service delivery. The program proactively engages in new ways with the Chinese hospital classification system to build the capacity of county hospitals in the TAR. The process of preparing for classification engages hospital staff in achieving hospital goals, building their motivation.

Focus: Tibet Health builds the capacity of staff and systems in rural hospitals in Tibet by proactively engaging with the existing Chinese classification system – a quality governance mechanism.

In 2013, a rural (Shigatse) health department approached Tibet Health to support ten county hospitals to prepare for hospital classification and to improve their ranking. Two groups of inland Chinese advisors were engaged by Tibet Health to visit and audit these hospitals against classification criteria. Advisors and hospital managers then jointly developed plans to address the gaps identified. Over a one-year period, the advisors made regular visits to the hospitals, providing tailored training and advice. To contribute to the hospital’s shared goals, staff actively worked to improve systems for cost, performance and infection control, implemented holistic nursing, and received training in several clinical specialisations.

At the end of 2015, 24 of the 27 participating county hospitals had passed the hospital classification review assessment with a higher level ranking. Improvements were verified through increased patient numbers, staff and patient satisfaction rates and revenue. Nurses and health workers demonstrated improved hand washing, waste management, and maintenance of pharmaceutical supplies.

Participating hospitals have developed their own adapted regulations, leading to measurable improvements in hospital management and practices. The quality of patient records has improved to meet requirements. Documented gaps in assessed criteria have been useful talking points for hospital managers with local government, leading to increased funding support.

Significance for the sub-theme area/field-building dimension of relevance: The Tibet Health Program demonstrates a new way of engaging with an existing quality governance system, in order to build capacity in rural hospitals. It also demonstrates that organisational culture can be changed to promote improvement in system performance. Together with focused technical advice, the process of preparing for classification assessment motivates staff by providing a clear set of goals with timeframes, and potential for reward through government and public acknowledgement, motivating staff and managers to build county hospital capacity.
Isabelle Lange, London School of Hygiene and Tropical Medicine, United Kingdom
Abstract ID: 3045

Keeping many irons in the fire: the multiplicity of partnerships in maternal health social franchising networks in Uganda and India

Co-authors: Isabelle Lange, Christine Nalwadda, Juliet Kiguli, Andreia Santos, Loveday Penn-Kekana, London School of Hygiene and Tropical Medicine; Makerere University School of Public Health

Background: Even with the global trend in policies aiming to make maternal care more affordable in the public sector, the private sector remains an important resource in lower and lower-middle income countries, with approximately 40% of pregnant women seeking care there (Powell-Jackson 2015). Despite its substantial share, this market is less regulated than the public sector, and recent years have seen investment in social and fractional franchising in the private health sector as an approach to improve quality of care and boost client numbers through standardised services, branding and improved affordability. This study reports on clinic directors’ perspectives of their involvement in three maternal health social franchise networks in Uganda and India, whose member clinics vary from small midwife-run centres to hospitals equipped to perform emergency obstetric care.

Methods: As part of this interdisciplinary evaluation in Uganda, Rajasthan and Uttar Pradesh, semi-structured interviews were carried out with fifteen clinic managers in each setting who were currently part of the social franchise or had left it. In six of these clinics, one week of participant observation was conducted alongside interviews with maternal health clients (5) and community health workers (2) in order to better understand the “logic” the clinics were operating under. Staff at the head implementing offices of the social franchises were also interviewed.

Results: Due to the complexity of local healthcare terrains and the variance in clinic contexts, the implementation of the social franchise models varied within each network. The particular challenges that these private clinics face – such as staff retention, lack of subsidies, skill training deficits, and external policies that effect health seeking behaviour of women – mean that managers negotiate multiple collaborations in both the private and public sector to grow their business. The opportunities to work with the social franchise to incorporate maternal health into service provision is seen as a strategy to benefit both their business as well as the community they serve.

Discussion: Given the inconsistency in funding streams and global partnerships, private clinics feel the need to diversify their alliances in order to survive, thereby blurring the definition of how fractional social franchises are constituted and defined in practice. Challenges facing the business of health mean that social franchises in maternal health do not always act as expected, but offer us the opportunity to learn valuable lessons about the resilience of the private sector and its strategies to offer consistent care.
Christine Leopold, Harvard Medical School & Harvard Pilgrim Health Care Institute, United States
Abstract ID: 1567

A Rapidly Changing Global Medicines Environment: How Adaptable are Funding Decision-Making Systems?

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Background: One of every five health care dollars spent by OECD countries is currently spent on pharmaceuticals. Expectations are that by 2020 global medicines use will increase by 25% to 4.5 trillion doses, at a total cost of $1.4 trillion globally. Momentous changes are happening in science offering new, high-cost diagnostic and treatment technologies that pose increasing economic and ethical challenges for policy makers everywhere who are responsible for providing affordable, equitable access to quality care, sustainably. In 2014, new, high-cost treatments that constitute breakthrough therapies for large numbers of patients have begun to present a new challenge: unprecedented budget impact. We examined how 9 high-income country health systems have absorbed the shocks created by new high-cost medicines.

Methods: This study is based on country health system reviews, key informant interviews, and a review of the literature on pharmaceutical policy challenges and adaptations to them. We conducted key informant interviews with senior decision-makers from pharmaceutical assessment and/or funding agencies in Austria, Australia, Canada, the Netherlands, New Zealand, Scotland, Sweden, and the US. In semi-structured interviews, we asked about major current policy challenges, the selection and coverage of medicines, patient cost-sharing, cost-containment and monitoring policies, and factors that facilitate and/or hinder systems’ capacity to adapt to changes in the sector.

Results: New high-cost medicines indicated for large volumes of patients substantially increased pressure in all systems to adapt their funding decision making mechanisms. Broader economic and political contexts, as well as the socio-cultural environments and changes in demography also contributed. Key informants stated that their systems responded to pressures by implementing new processes at the regulatory, technology assessment, funding and utilization management levels. In addition, systems sought to enhance stakeholder engagement and priority setting in funding decisions. Informants pointed to elements that facilitated and hindered adaptations of their systems, including political and legal environments, as well as geography, history, and related civil society expectations.

Discussion / conclusions: We conclude that most decision-making systems in high-income countries are actively seeking to address the new challenge of funding high-cost high-volume pharmaceutical products. Many questions remain unanswered. We believe collaborations across stakeholders and borders are needed to develop ‘out-of-the-box’ approaches to incentivizing, appropriately using, and sustainably funding innovations. Approaches need to be evaluated from the perspectives of different stakeholders so that promising technologies can translate into health gains in resilient systems.
Hannah Leslie, Harvard T. H. Chan School of Public Health, United States
Abstract ID: 3123

**A public sector community health worker program improved new mothers’ satisfaction with the health system: A cluster-randomized study in Dar es Salaam, Tanzania**

Co-authors: Elysia Larson, Harvard T. H. Chan School of Public Health

Background: Health system satisfaction is important intrinsically, for its potential to alter health behaviors, and to hold policy-makers and implementers accountable. However, there is a dearth of evidence showing how health system satisfaction can be created. The lack of skilled health workers is increasingly addressed through the addition of community health workers (CHWs) who have the potential to both positively and negatively affect how the population views the health system. This analysis exploits a cluster-randomized CHW intervention to causally assess how the CHW program impacts the population’s satisfaction with the health system.

Methods: From July 2012 to January 2014 CHWs in intervention areas received training in prenatal care and support from 31 newly hired community outreach nurses. CHWs worked with pregnant women in Dar es Salaam, Tanzania to increase utilization of maternal healthcare services. From May to August 2014 we interviewed a random sample of women who were either currently pregnant or had delivered a child within the previous two years. The survey used five-level Likert scales to assess women’s satisfaction with the CHW program and the public healthcare system in Dar es Salaam. We used generalized linear models with a logit link and the standard errors clustered at the ward level to assess the effect of the intervention on respondents’ satisfaction.

Results: 2,329 women participated in this survey (response rate: 90.2%). Women were on average 27.3 years old (range 15-48) and 32.9% had attended secondary school education or higher. 20% of women living in the CHW intervention areas reported high satisfaction with the public healthcare system, compared to only 11% of women in control areas. Women in intervention areas were 1.4 times as likely to be satisfied with the CHW program as women in the control areas (95% CI: 1.1, 1.8). Women in intervention areas were also 1.3 times as likely to be satisfied with the public health system (95% CI: 1.0, 1.7). The association between intervention arm and satisfaction was significant at the α=0.10 level at each level of the Likert scale, and these results were robust to sensitivity analyses that accounted for missing data and as-treated status.

Conclusion: This study provides evidence that CHW interventions can lead to improved public satisfaction with the healthcare system. In addition to potential benefits on the population’s healthcare access and health outcomes, policy makers may want to also take into account CHWs’ effects on health system satisfaction when determining their role.
Qian Li, Sichuan University, China
Abstract ID: 2403

Effects of China National Essential Medicines System---An analysis based on propensity score matching with difference-in-difference modelling

Co-authors: Qian Li, Fei Chen, Jay Pan, Min Yang, Xiaosong Li, Qun Meng, Sichuan University; Center for Health Statistical Information, Ministry of Health, China

Background: In April 2009, China initiated another wave of reform to reinvigorate the National Essential Medicine System (NEMS), aiming to curtail the escalating medical expenses and attract patient down-flow to primary health care facilities (PHFs). The reform focuses on every aspect of the system, including provincial-level pooled tendering and procurement; centralized drug distribution; mandate use of essential medicines and “zero-markup”, i.e. no additional margin gained from drug-selling, in government-run PHFs. By September 2011, China officially announced that NEMS has been scaled up in all government-run PHFs.

Objectives: We aim to evaluate the effects of NEMS on public PHFs, with special interests on (1) the medical expenses of per patient visit (EXPENSES), and (2) the role in attracting patient down-flow to PHFs (UTILIZATION).

Methods: A mixed approach was adopted, in the qualitative study we interviewed principle stakeholders. For the quantitative study, data for the period of 2008-2012 were extracted from the national annual surveillance data collected from 32,514 government-run PHFs of 3,552 counties in 31 provinces in China. The Propensity Score Matching with Difference-in-difference Modelling was employed to analyse the effects of NEMS on the EXPENSES, the number of patient visits and the total income of PHFs, with differentiated analysis on policy impacts between urban and rural areas, and among geographically and social-economically different regions.

Results: At national level, the NEMS implementation has resulted in the decrease of outpatient expenses (¥ 1.52 lower per visit) and inpatient expenses (¥ 19.93 lower per visit); the decrease of medicine cost is ¥ 1.65 in average outpatient expenses, and ¥ 21.26 in average inpatient expenses. But no similar effects on these indicators were found in urban PHFs. Among geographical regions, the difference in decrease of medical expenses is NOT significant. Meanwhile, the number of patient visits in PHFs increased as the expenses decreased, indicating that NEMS has some impact on attracting patient down-flow to PHFs. In rural PHFs, the total patient visits has increased but no similar impact has been found in urban PHFs. Among geographical regions, the number of patient visits in PHFs has increased to some extent, and the difference is NOT significant. No impact was found on the total income of PHIs at the national level.

Conclusions: NEMS has a stronger impact on decreasing patient medical expenses in rural areas than in urban areas in China. In terms of attracting patient down-flow to PHFs, NEMS has a stronger impact on rural areas compared with urban areas.
Jean Likofata, IntraHealth International/Democratic Republic of Congo, United States
Abstract ID: 1435

Democratic Republic of Congo: Generating Data to Get the Right Health Worker to the Right Place with the Right Skills at the Right Time

Co-authors: Jean Robert Likofata, Daren Trudeau, Nicaise Matoko, Kate Gilroy, Pierre Kasongo, Leah McManus, IntraHealth International/Democratic Republic of Congo; IntraHealth International; Ministere Sante Public, Democratic Republic of Congo

Background: In the Democratic Republic of Congo (DRC), a significant barrier to absorb health system shocks and meet development goals is the lack of a well-trained, well-distributed health workforce. Management systems to deploy, distribute, manage and compensate health workers are outdated, ineffective and plagued with governance issues. The Ministry of Health (MOH) at central and provincial levels lacks reliable data to effectively manage health workers and redeploy them quickly in response to unexpected shocks and emerging outbreaks. DRC is undergoing decentralization, transferring governance of systems, including health, to the provinces. Devolution provides the MOH an opportunity to more effectively institute reform of the compensation system and reinforce management systems with valid health workforce data.

Methods: IntraHealth International, through the Acès aux Soins de Sante Primaires (ASSP) project led by IMA World Health and funded by DFID, supported the MOH in Kasai Central and Kasai provinces to deploy iHRIS, an open source human resources information system. MOH teams interviewed health workers and entered data including identification, photo, job, and employment/education history. Daily data quality checks included physical review by supervisors of collected data against existing paper-based records.

Results: iHRIS deployment proved feasible and revealed 9% fewer health workers than reported on the official HR employee list in Kasai Central and 6% less in Kasai. Kasai Central has only 7.8 qualified health workers per 10,000 population and Kasai 6.9, compared to the World Health Organization’s recommended density ratio of 23. Health workers are inequitably distributed; most rural health zones have a density ratio of less than 8, while urban zones have a ratio of more than 12. The majority (57%) of health workers reported no government compensation, relying solely on a portion of funds generated by the facility; most health workers reporting government salaries and/or bonuses were located in urban areas. Analyses found that almost 10% of health workers in Kasai Central and 5% in Kasai should have retired by 2015 but were still working.

Discussion: The central and provincial MOH can use the up-to-date information on health worker numbers, locations and qualifications to realign compensation and better distribute, deploy and manage the health workforce, especially in times of crisis or outbreaks. As devolution progresses, the reinforced capacity of provinces to track, manage and pay their health workforce will contribute toward having the right health workers with the right skills in the right places to address shocks and maintain gains.
Medical Savings Account and Expenditures: A Study of the Spending Patterns for Patients with Chronic Conditions and Retirees in China

Co-authors: Hui Zhang, Sun Yat-sen University School of Public Health

Background: China has implemented Medical Savings Account (MSA) in many of its cities for over fifteen years. Empirical studies on the impact of MSA balance on health expenditure are rare, especially for retirees and patients with chronic conditions. Little information is available on whether enrollees with chronic diseases are receiving the necessary care under this financing system.

Objective: The objective of this study was to examine whether the needs of patients with chronic conditions are adequately met under the MSA system.

Methodology: Drawing on theoretical framework from Andersen’s behavioral model of health services use, the relationship between the enabling factor, measured by the MSA balance, and expenditures are examined with the need factor, measured by the presence of chronic conditions, as the moderator. A two-part model (logistic + OLS) is employed to estimate the effect of MSA balance on (1) the probability of having positive expenditures and (2) the incurred level of expenditures. The city in this study (Guangzhou) is a typical large city on the southern part of China. Total samples size is 114,657, including 68,251 employed enrollees and 46,406 retired enrollees with MSA accounts.

Results: With employed enrollees, U-shaped relationship is found between MSA balance and expenditures. This U-shaped relationship is different for the group without chronic conditions and the group with chronic conditions. For the employed enrollees without any chronic conditions, the lowest point on the curve is RMB 7,614 (US$976). However, for chronic employed group, it is RMB 1,375 (US$176). For retirees, an inverted U-shaped balance-expenditure relationship is found. In addition, this inverted U-shaped relationship is different for the groups with and without chronic conditions. Balance value at the turning point for the retired group without chronic conditions is RMB 1,321 (US$169). But for the retired enrollees having chronic condition, the balance value is RMB 2,182 (US$280).

Conclusions: The level of MSA balances is significantly associated with expenditures, but the relationship is nonlinear. The curvilinear relationship is not the same for the employed group and the retired group. As most retired MSA enrollees have poorer health status, they will consume more care and will incur higher expenditures. Chronic conditions moderate the curvilinear relationship for both the employed group and the retired group in such a way that enrollees with chronic conditions incur higher expenditures. It suggests that MSA are being used to pay for the needed health care for those with chronic conditions.
Zhi LIU, China National Health Development Research Center, China

Abstract ID: 3142

Study on the Attitude towards the Influenza and Flu Vaccine as well as the Vaccination Intent among Healthcare Workers in Qingdao City, China

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Background: Seasonal influenza vaccination among health-care workers can prevent influenza infection among patients in health-care settings. The main objective of this study was to understand the attitude of the Health Care Workers (HCWs) on seasonal flu and flu vaccine and analyze the main factors influencing the vaccination intent among HCWs, and consequently help to formulate the targeted strategies to increase vaccination.

Methods: We used cluster sampling to select eight health institutions in Qingdao, China. A prospective cohort study design was applied to conduct the baseline survey before flu season (November, 2013) and the random follow-up survey after flu season (June, 2014) on health care workers. The chi-square test and the Logistics Regression Analysis were adopted to respectively analyze the influencing factors of the vaccination intentions.

Results: A total amount of 1301 healthcare persons entered the cohort study. The influenza vaccination rate of the health care workers is 4.8% during the prior influenza season. Among the health-care workers, 42.8% believed that the influenza vaccine is safe and 45.1% assumed a passive attitude towards the inoculation of influenza vaccine. The score of the attitude factor of the health-care workers vaccination group was significantly higher than that of the non-vaccination group and the difference has statistical significance (p<0.05). Pre-season vaccination intention was higher in the vaccinated group than the non-vaccinated group. The stronger the preseason vaccination intention was, the higher the possibility of inoculating vaccine was. The vaccination intent was subject to attitudinal factors, such as regarding themselves as liable to flu, being worried after sick, believing the vaccine has protective effect, willing to accept the recommendation of the department for disease control, thinking it is easy to catch flu without inoculating vaccine or regretting without vaccination.

Conclusion: The vaccination intent will directly affect the actual vaccination behavior. The more positive the attitude on the flu vaccine the HCWs is, the stronger the willingness to vaccinate is. Mandatory vaccination policy and strategy of free vaccination can effectively improve the HCWs’ preseason vaccination intention, which can increase the vaccination rate in turn. So it is necessary to actively propagandize the safety of vaccine and effects among the HCWs. Mandatory vaccination policy and free vaccination strategy among the medical personnel should also be considered to increase their vaccine awareness and acceptance.

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Xiaoyun Liu, Peking University Health Science Center, China

Abstract ID: 2181

**Development and Evolution of Community Health Workers in Rural China**

Co-authors: Xiaoyun Liu, Weiming Zhu, Dan Hu, Minmin Zhang, Yang Zhao, Yaqun Fu, Peking University Health Science Center

**Background:** Barefoot doctors were developed in the 1960s in rural China, in the context of collective economy and Cultural Revolution. In 1985, China stopped using the term “barefoot doctor” and instead substituted the term “village doctor.” During 1980s to 1990s, the development of Community Health Workers (CHWs) in rural China stalled due to market economic reform. However, a workforce of more than 1 million CHWs has been sustained for more than half century who has been playing a critical role in providing primary health care to Chinese rural population.

**Methods:** This systematic review aims to synthesize China’s experiences in exploring and exploiting strategic partnership between the community and the formal health system to develop CHWs. Literature were searched from PubMed, CNKI and Wanfang, and synthesized according to partnership strategies for communities and health system to support CHW development.

**Results:** The townships and villages provided an institutional basis for barefoot doctor policy, while the formal health system, including urban hospitals, county health schools, township health centers, and mobile medical teams provided training to the barefoot doctors. But After 1985, the formal health system played a more dominant role in the CHW system including both selection and training of CHWs.

Technical supervision of barefoot doctors was provided by physicians from township health centers, while administratively, barefoot doctors were supervised by village officers. After 1985, supervision mainly came from the formal health system.

Barefoot doctors were remunerated from three main sources: agricultural or other business income of the rural collective economy, revenues from medical services, and government subsidies. During the 1980s, village doctors lost their financial support from the community. They began to heavily rely on revenues from drug sales.

There was no evidence regarding the monitoring system of barefoot doctors’ service. But since 2009, the quantity and quality of public service provision of village doctors have been closely monitored within the system on a monthly basis.

**Conclusions:** The key experiences of CHWs are the intersections between the community and the formal health system, including the joint ownership and design, supervision, incentives and monitoring system. However, since 1980s, the connection between the community and the health system in supporting CHWs has become less close.
Hueiming Liu, The George Institute for Global Health, Australia  
Abstract ID: 1181

A qualitative study of how Australian decision makers use economic evidence to inform investment in disease prevention.

Co-authors: Hueiming Liu, Janani Muhunthan, Jaithri Ananthapavan, Penelope Hawe, Alan Shiell, Stephen Jan, The George Institute for Global Health; Deakin University; Menzies Centre for Health Policy, University of Sydney; La Trobe University

Background: Cost-effective prevention strategies are needed to address the rising global burden from non-communicable disease within the context of growing financial pressures on health budgets. As a case study, we sought to explore whether economic evaluations are truly being harnessed to inform investment in disease prevention by Australian decision makers; and identified how economic evidence generated can better match funders’ needs.

Methods: Thematic analysis of in-depth interviews conducted with 15 high level stakeholders (Treasury, health departments and insurance industries) and documentary analysis of policies mentioned in the interviews.

Results: The type of prevention approaches and economic evidence that was relevant to decision makers differed by organisational perspective: whole of government approach, population health, and return on investment. Core considerations in their decision making process include accountability, equity and feasibility issues. Common perceived barriers to the use of economic evidence included a limited capacity of cost- effectiveness analysis to accurately capture the downstream implications of prevention strategies, incorporate the impact on non-health sectors and the need for outcomes within short funding cycles. Infrastructure to provide evidence regarding implementation, context, cost and intermediate measures of progress was identified as a potential facilitator to effective translation. A need was identified for capacity building of end users in understanding economic evaluations and to tailor the scope of studies to accommodate decision making criteria.

Discussion: The use of economic evidence by the stakeholders is limited and constrained by institutional imperatives, which differ from conventional notions of cost-effectiveness. Extrapolating our findings, we suggest that in order to build health systems’ resilience and responsiveness to tackle the epidemic of non-communicable diseases through innovation and effective prevention strategies- it is imperative to maximise the utility and accessibility of economic evidence in prevention to decision makers. This requires not only significant development in underlying infrastructure, capacity building and timely dissemination of evidence, but also requires a shift in the expectations that researchers and funders have of one another to enable productive and meaningful collaborations in health systems research.
Implementing Universal Health Coverage in Western China: Has Financial Burden of Healthcare Reduced for Rural Residents?

Co-authors: Weiwei Liu, Chongqing Medical University

Background: Since 2009s China’s health system reform has been implemented, with strong policy will and increased government investment in health. The coverage of health insurance for Chinese population has reached over 95%. This study was to examine and analyze the impact of implementing universal health coverage on reduction of financial burden of healthcare placed on people, especially those living in the rural areas of Chongqing, a great metropolitan city with over 30 million populations.

Methods: Sources of data used in the study mainly come from the National Health Accounts (NHA), Social and Economic Statistical Yearbook, and Health Statistics Yearbook of Chongqing in 2010-2014. Average disposable income per capita and average expenditure of healthcare per capita of both urban and rural residents, include other key socio-economic and health indicators, were used to examine changes in health service use and expenditure, analyze changes in equity in access to, and financing of, healthcare among the targeted population.

Results: Our study found that the share of the total health expenditure (THE) contributed by government, and social health insurance has, respectively increased from 28% to 31%, and from 32% to 39% during 2010-2014, while out-of-pocket payment (OPP), as percentage of THE has declined from 40% to 30%. OPP, as percentage of average disposable income among the urban residents has also reduced from 6% in 2010 to 4.9% in 2014. However, OPP, as percentage of average disposable income in the rural residents of Chongqing has actually increased from 4.5% in 2010 to 7.6% in 2014. Number of households with catastrophic health expenditure was not small in the rural areas. Main factors associated with the findings are 1) health insurance policies offered by urban employee health insurance scheme are more generous than that of rural residents; 2) disposable income level for the rural residents has not grown faster than that of healthcare expenses in recent years, OPP for deductible payment and co-pay remains a great financial burden.

Conclusions: Healthcare financing in Western China, such as Chongqing have improved, with a strong commitment from the Chinese government in recent years. However, the rural residents, particularly in Western inland of China still have financial barriers in accessing healthcare. Elimination of these barriers would have to require further government policy interventions in order to improve equity in financing of healthcare and to enhance health system resilience and achieve effective universal health coverage in the poor areas of China.
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Abstract ID: 973

Grupos Relacionados con el Diagnóstico (GRD) y su aplicación para mejorar la calidad y eficiencia en hospitales.

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Antecedentes: Los Grupos Relacionados con el Diagnóstico (GRD) se aplican en diversos campos y se están usando en los hospitales del Instituto Mexicano del Seguro Social (IMSS) para mejorar la calidad y eficiencia de la atención en los servicios de atención médica. Se procesan cada año y se realiza mediciones del porcentaje de letalidad hospitalaria y el promedio de días-paciente, y se comparan entre hospitales del mismo tipo para implantar medidas para mejorar la calidad y la eficiencia.

Métodos: Con datos secundarios de la base de egresos hospitalarios del IMSS se procesan en un algoritmo propio para agruparlos en GRD, se compara la información entre hospitales del mismo tipo según porcentaje de letalidad (PL) y promedio de días-paciente (PDP), se informa a las autoridades de cada hospital.

Resultados: De 724 GRD médicos y quirúrgicos, se seleccionan los GRD números 682 (Insuficiencia renal con comorbididades), 193 (Neumonía simple y pleuritis con comorbididades); ambos se asumen como trazadores para valorar la calidad de la atención. Las variaciones del PL va de 4 a 18, y PDP de 7 a 17 para el GRD 682; y para el GRD 193 el PL va de 41 a 96 y el PDP de 7 1 4 entre hospitales de tercer y segundo nivel. Por Hospital el H8, presenta los valores más altos para el GRD 682, y el H7 el mayor valor de PL y el menor de PDP para el GRD 193.

Discusión: Las variaciones en los datos son indicativos de procesos de atención médica diversos con carencias técnicas y de seguimiento de los protocolos de atención, también indican dificultades en los procesos de gestión hospitalaria y de disponibilidad y uso de recursos, de capacidad instalada, de personal de salud para la atención, de recursos diagnósticos y terapéuticos y de insumos. Todo ello contribuye a la mala calidad de la atención en particular en el H8.

Conclusiones: La aplicación de los GRD identifica áreas problemáticas y permite indicar sugerencias para la administración con calidad y eficiencia en los hospitales y facilita disminuir el número de muertes hospitalarias y optimizar el uso de las camas censables.
Building a Resilient Health System in Republic of Benin: Enhancing Community Health Care Provision through Quality Improvement Teams (QITs).

Co-authors: Kuassi Virgil LOKOSSOU, Issiaka SOMBIE, Jean-Paul DOSSOU, Ermel JOHNSON, West African Health Organisation; University of Antwerp, Belgium

Community Health Workers (CHW) were promoted in Republic of Benin to improve access and equity of maternal and child health care (MCH). These are people trained to handle the three priority diseases that are malaria, diarrhea and acute respiratory infections in children under 5. To improve community health workers’ performance, a QIT made up of a nurse and two or three community leaders was set up. Under the leadership of the nurse, the team is to assist CHWs in building their capacities to manage these diseases, incentivize them and make it easy for them to have access to populations. This work is an assessment of QIT’s contribution to CHW’s performance and MCH coverage in the municipality of Savè.

CHWs’ activity reports were used to determine their performance based on standards set by the National Community Health Policy (NCHP). A CHW is said to be efficient if 100% of children affected by either of the 3 priority diseases are properly treated, 100% of newborns are visited at least twice in the first week into life and at least two educational sessions are held per month. Routine data from the National Health Information System (SNIS) were used to work out coverage indicators for maternal and child care (percentage of new antenatal visits, number of births attended by skilled personnel and the number of fully vaccinated children). Indicator trends were analyzed over three years before and four years after the QITs were set up.

The QITs helped to improve community health Workers’ performance and maternal and child health indicators in the municipality. Community Health Workers’ performance as indicated by the standards set out by the National Community Health Policy increased from 76% in 2008 to 100% in 2014. Following the setting up of QITs, the percentage of new antenatal visits, skilled childbirth and use of family planning services rose respectively from 14% to 27%, from 12% to 17% and from 27% to 43% between 2008 and 2014.

There was a significant improvement in CHW’s performance and the use of maternal and child health services in the municipality of Savè following the implementation of QITs. In a context of scarce human and financial resources, this strategy, if sustained, may help to build a strong and resilient health system geared towards meeting community needs.
Poster Abstracts

Virgil Lokossou, WAHO, Burkina Faso
Abstract ID: 1419

L’Organisation Ouest Africaine de la Santé peut-elle devenir centre de promotion du transfert-application des données probantes en faveur de la SMNI ?

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Méthodes : Nous avons mené une évaluation formative inspirée de l’outil d’autoévaluation SAT développé par la Fondation Canadienne de Recherche sur les Services de Santé. Cette approche transversale à visée analytique combinait une revue documentaire, des entretiens individuels et de groupe au sein de l’Organisation et un questionnaire individuel auto administré. Deux dialogues avec les parties prenantes régionales organisés avant et après l’évaluation ont permis de délibérer sur les opportunités de changement.

Résultats : l’OOAS fonctionne comme une administration supranationale dans laquelle les conditions propices ne sont pas en place pour garantir le recours systématique et explicite aux données probantes. Le processus décisionnel est «fondé sur l’éminence», c’est-à-dire basé sur l’expérience des professionnels et les avis des consultants et experts endossés lors des réunions. La pensée évaluative et la culture de l’évaluation sont peu visibles au sein de l’OOAS. Les domaines exigeant un renforcement des compétences en matière de politiques et programmes de santé éclairés par les données probantes ont été identifiés. La disposition à changer des dirigeants est remarquable avec l’engagement à créer les incitations organisationnelles à l’instar des directives exigeant le recours explicite aux données probantes lors des exercices de planification et l’élaboration des mémos à l’intérieur d’une part et lors de la préparation des requêtes d’assistance par les états-membres d’autre part. Les professionnels ont formulé des demandes explicites de formation à l’utilisation systématique des données factuelles et la pensée évaluative. Les parties prenantes attendent que l’OOAS soutiennent la production des revues systématiques et des lignes directrices sur les questions prioritaires, l’animation d’une communauté de pratiques ambitionnant l’innovation au service de la SMNI dans l’espace CEDEAO et les plateformes nationales de promotion de la prise de décision en santé éclairée par les données probantes.

Conclusion : Cette analyse institutionnelle met à jour un potentiel remarquable l’OOAS est disposée à jouer un rôle d’agence de mobilisation et de courtage des données probantes pour renforcer les systèmes de santé au sein de la CEDEAO.
Enhancing Health System responsiveness through Community Participation: Health Committees as vehicles for meaningful participation

Co-authors: Leslie London, Hanne Haricharan, Therese Boulle, Maria Stuttaford, Damaris Kiewitz, Anita Marshall, Fundiswa Kibido, Pat Mayers, University of Cape Town; Cardiff University; University of the Western Cape; Training for Transition

Background: Community participation and health as a right are key elements of responsive health systems. However, little research links human rights approaches to governance in ways that recognize participation as critical to health systems.

Methods: A three-year project explored the potential of community participation structures known as Health Committees (HCs) in two urban centres in South Africa to serve as vehicles for increasing health system responsiveness and strengthening health governance through realizing the right to health. To test models of good practice, the study implemented a range of interventions: training of HC members, strengthening Civil Society networks, engagement with health officials and policy-makers, lobbying for effective policies to empower HCs, training of health workers and development of local systems for HC effectiveness. A mixed methods evaluation was undertaken, including qualitative and quantitative assessments of HC members, providers and managers’ experiences and perceptions.

Results: HCs were established without sufficient capacity building for effective community oversight largely because of policy uncertainty. HCs were often relegated to roles reflecting weak forms of participation. Evaluation showed that after training, HC members reported greater clarity in role understanding, greater confidence to exercise governance roles and greater understanding of the health system and human rights claims. However, health workers were often poorly oriented to community participation. While capacity building was effective in strengthening HC members’ sense of agency, their capacity to engage the health system and their ability to exercise claims to health rights, as capacitation of HCs increased, so did the potential for conflict with the services if providers are not reoriented. Lack of articulation of HCs with decision-making structures at higher levels of the health system undermines the effectiveness of community-level participation structures.

Discussion: Capacity building of HCs can successfully strengthen their agency as vehicles for community voice and meaningful participation, particularly where educational methods draw on Freierian approach to empower committees and integrate rights-based approaches. Such training, however, must be situated in a broader contextual set of reinforcing health systems interventions - in particular, training of providers and managers must be linked to staff management and accountability systems that support community engagement. The complementary and supporting role of an active civil society is also necessary. Lastly, an overemphasis on hardware and tangible software ignores the importance of
intangible software, in the form of attention to trust, respect, effective communication, values and power, in making Health Committees effective vehicles for community participation.
Hypertension control in Cuba: evidence of a responsive health system

Co-authors: Esteban Londoño Agudelo, Armando Rodríguez Salvá, Addys Díaz Piñera, Patrick Van der Stuyft, Institute of Tropical Medicine, Antwerp-Belgium; Instituto Nacional de Higiene, Epidemiología y Microbiología de Cuba; Institute of Tropical Medicine, Antwerp-Belgium.

Hypertension and related cardiovascular diseases are the leading cause of morbidity and mortality worldwide. Notwithstanding, the majority of health systems provide inadequate care for their chronic conditions. Health services, in particular in resource constrained settings, are mainly designed to provide care for acute problems and care for chronic diseases is often reduced to the belated management of acute exacerbations in specialized settings. Globally, the proportion of hypertensive patients under treatment, let be controlled, remains very low.

Cuba went through an epidemiological transition from mid-20th century onwards. Nowadays, chronic diseases are estimated to cause 86% of all deaths in the country and cardiovascular diseases are responsible for 39% of overall mortality. Still, Cuba not only achieved remarkable control of communicable diseases but its health system also attained among the better hypertension control figures in the world. This responsiveness and result regarding hypertension treatment is reportedly associated with a very well organized national health system that is based on a primary health care approach.

To determine the current hypertension control rates in Cuba we carried out in 2012 a cross-sectional study in two municipalities: Cárdenas and Santiago. In each municipality two urban health areas of 30,000 inhabitants were selected. We interviewed and measured current blood pressure in a random sample of 1333 hypertensive patients aged 18 years and older that had been previously diagnosed in family doctor practices. Hypertension control was defined as blood pressure be lower 140/90 mmHg.

1218 hypertensive patients (91.4%(95% CI, 89.9%-92.9%)) were receiving pharmacological treatment and 773 (58%(95% CI, 55.3%-60.6%)) had controlled hypertension. Municipality had no influence but living in a specific health area within a municipality was found to be associated with hypertension control: 65.4% (95% CI, 59.9%-70.9%) and 60.8% (95% CI, 55.6%-65.9%) in the health areas “JAE” in Matanzas and “Grimau” in Santiago respectively, against 53.3% (95% CI, 48.1%-58.5%) and 53.8% (95% CI, 48.5%-59.0%) in the health areas “Finlay” in Santiago and “Moncada” in Matanzas respectively.

These results suggest that, apart from national health policy, hypertension control can be impacted by the way in which health care services are operationalized at micro level, in specific health areas.
Qian Long, World Health Organization, Switzerland  
Abstract ID: 1226

Improving monitoring of reproductive health indicators in Africa: Experiences from a multi-country initiative

Co-authors: Maria Barreix, Özge Tunçalp, Namuunda Mutombo, Lale Say, World Health Organization; African Population and Health Research Center (APHRC)

Background: Universal access to sexual and reproductive health remains part of the unfinished business of global development. Inadequate access to and use of family planning services and unsafe abortion practices, among others, are responsible for lack of progress, with the slowest improvement in the African Region. The sustainable development agenda offers a new opportunity to re-double efforts and achieve universal access to sexual and reproductive health. To make health systems more responsive, Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCAH) indicators are being monitored through quarterly scorecards in various African countries. Additionally, a range of program indicators carefully selected and monitored, would help to detect changes periodically, identify gaps between status and goals, and propel actions for achieving success.

Methods: The World Health Organization’s initiative, Strengthening Measurement of Reproductive Health Indicators in Africa supported Ministries of Health in Ghana, Nigeria, Kenya, Uganda and Zimbabwe to revise information systems, incorporated selected family planning and safe abortion care indicators (including post-abortion contraceptive use by method) and strengthen national information systems for routine monitoring. Countries and legal advisors updated abortion care guidelines, trained providers on the boundaries of each country’s laws, implemented activities centered on building consensus with stakeholders and implementing partners, harnessing diverse actors to promote an environment conducive to service provision and improved care. Country teams conducted systematic evaluations on the status of reproductive health indicators, identified new indicators based on their needs, and outlined barriers to strengthening routine measurement of priority indicators. Countries updated monitoring and evaluation frameworks and indicators, built staff capacity in selected pilot areas to ensure good quality data collection and its use for programmatic decision making, and increased feedback to and from subnational levels.

Results and Discussion: Barriers identified during implementation included: restrictive abortion laws, changes in government due to elections (leading to staff turn-over and administrative delays), low health staff capacity regarding existing indicators, and competing interests for Ministry and facility-level staff time. Steps for further improvement were identified, including scaling up to the national level, incorporating new indicators into RMNCAH scorecard, increasing collaboration with the private sector, conducting family planning costing exercises and an ex-post evaluation.

A strategy to standardize and harmonize reproductive health indicators should consist of stakeholder support at the national level, while building data collection capacity and providing supervision at the
sub-national level. This approach for strengthening routine family planning and safe abortion information supports a responsive and resilient health system.
Christopher Lovelace, Health Finance and Governance Project/ Abt Associates, Inc., United States

Abstract ID: 1424

Improving TB Service Delivery Outcomes: Developing new TB Hospital Payment System toward TB Hospital Restructuring for More Efficient and Effective Patient Care

Co-authors: Olga Zues, Alexandr Katsaga, Sheila O’Dougherty, Barton Smith, Christopher Lovelace, Sara Feinstein, Health Finance and Governance Project/ Abt Associates, Inc.; Independent consultant/researcher; Health Finance and Governance Project/ Abt Associates, Inc..

Background: To improve the effectiveness and efficiency of TB treatment, Kyrgyzstan is shifting toward WHO-recommended outpatient TB care. The country’s general hospital system transitioned to Diagnosis-related group (DRG)-based financing in the 1990s, but the vast network of TB hospitals (27 for a population <6 million) continue to be paid based on inputs rather than outputs. This system incentivized hospitalization - facilities would lose funding if hospitalization decreased.

In 2015, the state health insurance fund and USAID (through the HFG Project) developed a DRG payment system for TB hospitals. Under this system, hospitals receive payment for the cases treated. The purpose is to facilitate TB hospital restructuring and reinvestment of savings, reallocate funding, and shift to outpatient TB services.

Methods: In 2015, the HFG Project carried out a case and cost analysis. Data from all 21,501 cases treated in TB hospitals (all of 2013 and January-August 2014) were analyzed. Analysis was conducted on case structure of treated patients and average length of stay (ALOS), to identify opportunities for efficiency gains. Using both this case analysis and a cost accounting analysis from five hospitals, the team developed a set of 10 clinically and financially cohesive groups with corresponding relative payment weights.

Results: Analysis revealed average length of stay of 64.4 days for patients with pulmonary TB. Data also showed over-diagnosis of TB, hospitalization of patients with non-TB or latent TB, and many repeated hospitalizations. Simulation analysis using new payment weights and current case mix predicts $1 million in savings over the first year of full implementation. In August 2015, the state health insurance fund began introducing DRG-based payment for TB hospitals. The system has spurred MOH support for downsizing the country’s expansive TB hospital system. The national roadmap for TB hospital restructuring being developed has gained international attention from the WHO and others as a model for other former Soviet Union countries.

Significance for Sub-Theme: Potential benefits include overall reduced cost of TB treatment, and reduction numbers of hospitalizations and ALOS, which will allow TB hospital restructuring and reallocation of resources—funding and specialized staff—to primary health care for fully outpatient TB treatment.

These findings have relevance to former Soviet Union countries in particular and generally for countries looking to move away from supply-side line item budgeting toward purchasing under social insurance schemes.

Target audience: those interested in links between health finance and service delivery outcomes
Caroline Lynch, London School of Hygiene and Tropical Medicine, United Kingdom
Abstract ID: 2310

Routine stock data: A new frontier in assessing supply chain systems in Low- and Middle- Income Countries

Co-authors: Caroline A Lynch, Francesca Cavallaro, Faye Adama, London School of Hygiene and Tropical Medicine; Institut Santé et Développement (ISED), Université Cheikh Ante Diop

Background: Increased attention has been paid recently to reducing stock-outs in public health facilities. A limited number of cross-sectional studies have assessed availability of medicines, with mixed results, possibly reflecting the different delivery mechanisms for different medicines. Yet, there is no published data from routine sources on stock levels in public facilities. We hypothesize that the use of routine stock data can expose differences in how health products are supplied to facilities, highlighting supply systems that are more effective or identifying weaknesses towards which interventions can be more specifically targeted.

Method: We used different medicines and commodities as proxies for different types of supply in Senegal. We compiled monthly stock card data for malaria drugs and tests, family planning (FP) commodities, oral rehydration salts (ORS) and amoxycillin syrup. Antimalarials are supplied through the national supply programme, but receive more supervision, and are reported differently than other health products. FP, ORS and antibiotics were delivered through the normal supply chain up until 2012 after which FP was delivered through a parallel system rolled-out nationally between 2012 and March 2015. For this study, stock data from January 2010/2011 - May 2015 were collected in 41 health posts and 13 district depots in 4 regions of Senegal.

Results and discussion: Preliminary analysis of FP products in one region indicate that contraceptive stock-outs were frequent in facilities. The percentage of months with at least one stock-out across facilities was low for Progesterone-Only Pills (POPs: 5.7%) and 3-month injectables (7.2%) but higher for 5-year implants (12.6%) and Combined-contraceptive Pills (CCP: 23.8%). Standard Deviations (SD) for between-facility variation was high for CCP (41.7%) and low for implants and injectables (7.9%) indicating that health facility specific issues were affecting stock availability. At district level, stock-outs were more frequent, between 13.2% (POPs) and 23% (5-year implants) of months with at least one stock-out. However, the mean number of months stocked-out was lower in district depots (0.1 – 0.3 months) compared to facilities (0.4 – 1.4 months). We are undertaking similar analyses to compare between health products. We will also examine facility-level risk factors for stock-outs.

Conclusions: Making use of routine stock data can ensure supply chains and the health system are more responsive to sudden changes or shocks. Understanding the dynamics of stock availability, for different types of health products, can highlight gaps in supply chain distribution and allow decision-makers to better target quality improvement interventions.
Eleanor MacPherson, Liverpool School of Tropical Medicine, UK
Abstract ID: 1133

Engaging powerful players and building new partnerships to address neglected diseases: a case study of female genital schistosomiasis

Co-authors: Eleanor Elizabeth MacPherson, Laura Dean, Natsuko Hatano, Kate Hawkins, Russell Stothard, Margaret Gyapong, Sally Theobald, Liverpool School of Tropical Medicine; Pamoja Communications; Dodowa Health Research Centre

Background: Schistosomiasis is transmitted through exposure to infested water bodies. In Africa, approximately 200-220 million people are living with schistosomiasis. 600 million people are vulnerable. Despite this we have inadequate diagnostic systems, poor data on prevalence in different settings, and little medical or social support for people who are infected and affected.

Power and politics are vital to understanding whose needs are prioritised within health systems and universal health coverage. Those with less privilege often face difficulty in realizing the right to health. We use female genital schistosomiasis (FGS) as a lens to interrogate these issues. FGS can cause serious damage to the urinary and reproductive systems of affected women who experience bleeding, vaginal discharge, genital lesions, nodules in the vulva, discomfort and pain during sex, sub-fertility, miscarriage and increased vulnerability to HIV.

Methods: Key informants comprised of policy makers from international organisations and national Ministries of Health, programme implementers and researchers were engaged in international and national stakeholder meetings. Data collection and analysis is ongoing with initial work based on key informant reflections from these meetings. Interviews with women living in infected communities will be included in this paper.

Results: Preliminary findings suggest that the needs and voices of women and girls affected by FGS have been neglected within work on health systems and NTDs. Key informants identified the following barriers to equity: a failure to work across different areas of the health system (e.g. NTDs, HIV and reproductive health) in a harmonious and joined up manner; poor training on FGS among health care workers at primary and more specialist (e.g. gynecological) levels; a focus on prevention of schistosomiasis without the concurrent investment in diagnosis and care for those with chronic symptoms related to the condition; discomfort among NTD and health systems experts in addressing the gender, sex, and sexuality issues inherent in this issue; and donor pressures to focus on NTDs that are amenable to preventive chemotherapy.

Conclusion: Implementation research to integrate vertical disease programmes with the primary health care systems is essential to ensure health systems that are responsive to the most vulnerable and marginalized whose health needs are too frequently neglected. However, this requires finding strategies to create new partnerships across thematic and disciplinary siloes. This will require the ceding of power
in relation to financing and perceived expertise which are oft overlooked challenges to creating resilient and responsive health systems.
Bvudzai Magadzire, University of the Western Cape, South Africa  
Abstract ID: 2737

**Health system resilience in the event of whole-system change: Lessons from implementation of a centralised medicines dispensing model in South Africa**

Co-authors: Bvudzai Priscilla Magadzire, Bruno Marchal, Kim Ward, University of the Western Cape; Institute of Tropical Medicine

**Background:** Whole-system interventions have been described as those entailing wide changes in service delivery arrangements and relationships between actors. One of such interventions, the Chronic Dispensing Unit (CDU) was introduced in 2005 in the Western Cape Province to improve access to medicines. The CDU is an out-sourced centralised dispensing service supporting over 200 public facilities. The objectives are to: reduce pharmacists’ workload, decongest health facilities and reduce patient waiting times.

**Methods:** We report on findings from a qualitative study in which we identify the challenges to CDU implementation on a system-wide level and as experienced at four primary healthcare facilities in Cape Town. We interviewed a cross-section of actors, senior and frontline (N=45) who were involved the design and implementation of the intervention. Data was thematically analysed by identifying the main influences shaping the implementation process.

**Results:** The early stages of CDU implementation introduced a system-wide shock to the health system. Reasons included: rapid implementation driven by political interests; limited buy-in from frontline actors who felt that the intervention introduced cumbersome processes and limited actor orientation. These issues led to increased resistance and frustration by actors. To address the crisis, the Western Cape Department of health (WCDOH) halted implementation for about six months and gradually started again. The second major crisis occurred five years into implementation when it was time to appoint a new service provider. The tender process was lengthy and the change-over involved legal battles with the first service provider and loss of some patient data. Once the service provider was appointed, complexity of data transfer and increased demand for services made the transition difficult. For the system to re-adapt, the appointed service provider and WCDOH jointly reverted to manual dispensing and suspended some facilities from the CDU for about three months. Some previous gains to the health system were lost and so was actors’ trust in the health system. In addition, a lack of integrated information systems and unpredictable patient behaviour made CDU implementation difficult at facility level. Despite the disruptions, leadership commitment has been a key pillar in sustaining the intervention.

**Conclusion:** Our results show how an intervention meant to strengthen service delivery experienced various unanticipated challenges, most of which illuminated existing health system weaknesses. The CDU experience can provide lessons for implementation of similar interventions. Finally, although we focus on the implementation challenges, many benefits have also been experienced.
Business Model Development for Fecal Sludge Management: Insights from Bihar, India

Co-authors: Aprajita Singh, Genevieve Kelly, Shankar Narayanan, Population Services International (PSI)

Purpose: Bihar, India accounts for about a third of global open defecation (OD) and is facing a sanitation crisis. Sanitation improvements in Bihar are critical for global achievement of sustainable development goal (SDG) 6 for sanitation. Fecal contamination accounts for both high rates of infant mortality and stunting in children. The situation is particularly worse in rural areas with broken supply chain systems and markets distorted by public subsidies. In peri-urban and rural areas where long distances and high fuel costs create few incentives to carry waste to the urban treatment facilities, there is no system for Fecal Sludge Management (FSM).

Focus/Content: Since 2012, Population Services International (PSI) has been implementing Project 3SI in Bihar to increase access and use of toilets in rural areas. The project team quickly identified that without a safe emptying solution, the project would only serve to delay the fecal contamination of the environment. In 2014, PSI began implementing Project Prasaadhan to address critical gaps in FSM and to ensure a systems approach towards an OD-free Bihar.

Prasaadhan deploys a Total Market Approach (TMA) to address barriers that cause market failures despite the presence of willing buyers and sellers. It facilitates linkages between a local sewage treatment plant, supply chain actors, and households, and deploys a decentralized model to align capacities and incentives for FSM in Bihar. Leveraging ongoing private sector interest, PSI supported the construction of a local, small-scale sewage treatment plant (STP) which now has the capacity to treat 25,000 liters of waste per day. PSI is also testing a tiered payment system in which operators receive an increasing payment for every full tank of waste they safely dump.

Significance: To date, PSI has facilitated the safe collection and treatment of over 3 million liters of fecal sludge, serviced over 3,855 households, and sold 366 bundled services in which households purchase both a toilet and regular pit emptying. PSI is working with the government to gain support for a favorable policy environment and FSM business models that are scalable, sustainable, and complement the ongoing government efforts. The early results from the intervention in Bihar demonstrate the potential of strengthening existing markets to find decentralized low-touch solutions.
Coaching using the WHO Safe Childbirth Checklist as a quality improvement approach to addressing barriers to Essential Birth Practices: The BetterBirth Trial experience

Co-authors: Nabihah Kara, Lisa Hirschhorn, Danielle Tuller, Megan Marx Delaney, Pinki Maji, Joston Meloot, Tapan Kalita, Manisha Tripathi, Narendra Sharma, Rebecca Firestone, Bhala Kodkany, Vishwajeet Kumar, Atul Gawande, Katherine Semrau, Harvard T.H. Chan School of Public Health; Population Services International; Jawaharlal Nehru Medical College; Community Empowerment Lab

Background: The BetterBirth Program includes coaching on WHO Safe Childbirth Checklist (SCC) use, monitoring, and data feedback to improve uptake of essential birth practices (EBPs) and availability of facility and bedside supplies. This implementation package was designed to align with existing quality assurance systems in Uttar Pradesh, India, and improve the governance of quality as well as change organizational culture across facilities for institutional deliveries. The work was done as part of a large randomized trial measuring the impact of SCC-focused coaching of front-line health workers on delivery of EBPs and maternal and neonatal mortality.

Methods: BetterBirth coaching aims to empower individuals and systems to develop sustainable solutions to barriers preventing adoption of EBPs. Coaches underwent a 5-day training program that incorporates theories of behavior change, a framework for diagnosing barriers, and core coaching skills (active listening; observation; structured feedback; barrier diagnosis and facilitated problem solving). Health facilities receive peer-to-peer coaching (nurse to nurse, physician to physician) with tapered dosing over eight months. To ensure sustainability, BetterBirth coaches transfer coaching and monitoring skills to a motivated facility-based champion - the Childbirth Quality Coordinator. Coach-measured EBP performance and supply data are collected in near-to-real-time and regularly shared at facility, district and state-levels to collectively problem-solve and discuss progress. Here we present coach-observed uptake of EBP as a percentage of total coach-observations.

Results: Across 279 observations in 5 facilities, coach observation data found birth attendants used the checklist (80.0%) with improvement in consistent EBP provision (from 5 to 15 out of 17, p <0.01). In 90% of the cases, blood pressure and temperature were measured, and oxytocin provided postpartum. Key barriers to providing EBPs included: opportunity/supply (67%), motivation (29%) and ability/knowledge (2.2%). Increase in assessed supplies was also seen with an average of 65% (30 of 46) available at baseline with an average of four supply gaps successfully closed per facility using existing procurement channels. Examples included: water (infrastructure), thermometers (equipment), and oxytocin (medicine).

Discussion and Conclusions: We found that peer-to-peer coaching has been effective in addressing barriers to providing EBPs, including birth-supplies availability. The BetterBirth peer-to-peer coaching model using the WHO SCC offers an innovative capacity building and health system strengthening
approach to improve supply availability and uptake of EBPs. Partnering with Indian government stakeholders and collaborators worldwide, lessons learned from the trial may be incorporated to develop a coaching model to reduce preventable harm for mothers and infants worldwide.
Faith Mambulu, Centre for Health Policy-School of Public Health-University of the Witwatersrand, South Africa
Abstract ID: 1968

A CRITICAL APPRAISAL OF GUIDELINES USED FOR SEVERE ACUTE MALNUTRITION HEALTHCARE IN SOUTH AFRICA

Co-authors: Faith Nankasa Mambulu, John Eyles, Prudence Ditlopo, Centre for Health Policy-School of Public Health-University of the Witwatersrand

Organizational Culture Theory (OCT) focuses on human behaviour in the context of an organisation; its 3 main components include artefacts (visible behaviour), values (rules and standard behaviour) and underlying assumptions (why workforces behave in a certain way). Artefacts and underlying assumption are widely explored in health systems research; however scholars barely scrutinize the technical quality of values. Using the example of healthcare referral process for children with severe acute malnutrition (SAM) in South Africa (SA), this paper discusses the comprehensiveness of documents (global and national) that guide the country’s SAM healthcare. This research is relevant because SA studies on SAM mostly examine the implementation of World Health Organisation (WHO) guidelines in hospitals making their technical relevance to the country’s lower level and referral healthcare under explored. To add to both literature and methods for studying SAM healthcare, a qualitative document analysis of 7 child healthcare guideline documents (global and national) and complementary expert interviews (n=7) were used. Data from both methods enabled the examination of document’s comprehensiveness in guiding SAM healthcare within the country’s referral system and credibility (rigour and stakeholder representation) of their development process. As countries are working towards building resilient health systems that can bounce back from crisis while offering quality healthcare and making transformation for better services, involving relevant stakeholders in planning healthcare and prioritizing contextual needs is vital. Hence analyses were based on the analytical appraisal of guidelines, research and evaluation (AGREE) approach domains of scope and purpose; stakeholder involvement; rigour of development; clarity of presentation; applicability and editorial independence. Findings reveal that no documents covers all steps of SAM referrals, however each address certain steps thoroughly apart from transit care; national documents are mostly modelled over WHO guidelines yet their localisation aspects are not explicit; some documents fall short on actors or context of SAM care; and the formulation process is mostly unclear. We concluded that there is a need to emphasize the healthcare level appropriateness of each document, the localisation of adaptations from WHO documents and filling referral gaps. With the guidelines formulation teams not representative of all users and the influence of funders concealed, stakeholders’ involvement need to be justified. This is critical because factors that affect SAM service lay outside in-hospital care thus a need for community, medical, activist, and administrative representation.
Kate Mandeville, London School of Hygiene and Tropical Medicine, United Kingdom
Abstract ID: 578

The use of specialty training to retain doctors in Malawi: a cost effectiveness analysis

Co-authors: Kate L Mandeville, Adamson S Muula, Titha Dzowela, Godwin Ulaya, Kara Hanson, Mylene Lagarde, London School of Hygiene and Tropical Medicine; College of Medicine-University of Malawi; Christian Health Association of Malawi; Blantyre Health Research and Training Trust

Background: Few medical schools and high emigration have led to low numbers of doctors in many sub-Saharan African countries. The opportunity to undertake specialty training has been shown to be particularly important to retain doctors. Yet limited training capacity means that doctors are often sent to other countries to specialise, increasing the risk that they may not return after training. Expanding domestic training, however, may be constrained by the reluctance of doctors to accept training in their home country. We modelled different policy options in an example country, Malawi, in order to examine the cost-effectiveness of expanding specialty training to retain doctors in sub-Saharan Africa.

Methods: We designed a Markov model of the labour market for doctors in Malawi, incorporating data from tracing studies, doctors’ preferences for specialty training and local cost data. This is the first time to our knowledge such a model has been constructed for the medical workforce in sub-Saharan Africa. A government perspective was taken with a time horizon of 40 years. Expanded specialty training in Malawi or South Africa with varying mandatory service requirements were compared against baseline conditions. The outcome measures were cost per doctor year and cost per specialist year in the Malawian public sector.

Results: The most cost-effective intervention was expansion of specialty training within Malawi. Longer periods of service before training were more cost-effective, with five years’ mandatory service adding the most value in terms of doctor-years. At the end of 40 years of expanded training in Malawi, the medical workforce would be over fifty percent larger and there would be over six times the number of specialists compared to current trends. These policies, however, would cost more than current government spending. The government would need to be willing to pay at least 3.5 times more per doctor-year for a five percent minimum increase in total doctor-years over baseline and at least fifty percent more per specialist-year for a maximum six-fold increase. The most optimal option differs between subgroups of doctors, with greater increases in doctor- and specialist-years possible in those with more flexible preferences.

Conclusions: Sustained funding of specialty training could lead to improved retention of doctors in sub-Saharan Africa. We demonstrate that modelling of health workforces is feasible in low-resource settings, and more routine application of cost-effectiveness analyses to health workforce decisions would be of considerable value to policymakers.
Poster Abstracts

Sarah Marks, Malaria Consortium, United Kingdom
Abstract ID: 2798

How sustainable are village owned platforms for behaviour change communication and community health worker support?

Co-authors: Sarah Alexandra Marks, Daniel Strachan, Edmound Kertho, Sylvia Meek, Karin Kallander, James Tibenderana, Malaria Consortium; University College London; Malaria Consortium Uganda

Background: A village owned platform for behaviour change communication (BCC) and community health worker (CHW) support was implemented in 440 villages in Uganda between 2012-2014. The platform, known as a ‘village health club’ (VHC), was developed as part of the inSCALE project and centred around five key pillars: open to all, CHW focused, fun and purposeful, village owned, and strength based, with a participatory learning and action cycle. The aim of the VHCs was to increase CHW motivation and performance, access to CHW services, and the coverage of appropriate treatment for children with diarrhoea, pneumonia and fever. The VHCs led to a 56% increase in appropriate diarrhoea treatment and reduced CHW drop-out compared to control areas. Post implementation, clubs have been converted into micro-financing initiatives, or have registered as community based organisations, which can apply for local government funding. Consequently an evaluation was conducted to determine whether the clubs are still active 3 years later, determine what the barriers and facilitators were to their sustainability, and their potential to support both future BCC strategies and CHWs.

Methods: CHWs that had facilitated the VHCs during the inSCALE project were phoned and interviewed regarding the status of the clubs. From these interviews, CHWs were recruited to 4-6 focus group discussions (FGDs) based on specific characteristics or ‘strata’. These strata were selected to provide maximum diversity of VHC experience. The FGDs explored CHW’s perspectives on the functioning, sustainability and potential of VHCs. In addition, data from the phone calls, was also used to identify 4-6 clubs for case studies. The sample included two ‘typical’ VHCs and a further 2-4 VHCs that had been maintained for ‘unusual’ reasons. Case studies of the VHCs were built from interviews with the VHC facilitator, key participants and local leaders, as well as the data previously collected.

Results: Data collection and analysis is still on-going with results expected in April 2016. An analysis of the themes and issues uncovered will be presented in the case studies and cases compared to highlight the barriers and facilitators to VHC sustainability, as well as their potential to support both future BCC strategies and CHWs.

Discussion: If VHCs are viable in the long term, the clubs could be adopted more widely as a sustainable way to conduct BCC activities and offer a long term platform to unify and integrate BCC activities within communities, and potentially increase CHW retention at the same time.
Elisabeth Martin, Université Laval, Canada
Abstract ID: 1921

When central health system reform meets local politics: insights into Quebec’s health sector governance transformation

Co-authors: Elisabeth Martin, Université Laval

Background: Vertical integration of health care facilities is one of various solutions to reorient health systems, but such experiments remain limited. In 2003-2004, a major reform launched in the province of Quebec (Canada) completely revised the health system governance scheme. A new organizational model was introduced integrating acute, long term, community and primary care services through health facilities mergers defined on a geographical basis. The objective of this study was to look into how and under what conditions this policy was implemented in local territories.

Methods: Rooted in a political economy theoretical framework, six case studies were conducted in territories within two regions (Bas-Saint-Laurent and Chaudière-Appalaches). Data was collected using documentary analysis of governmental, organizational and media publications (n=1048) and 32 semi-structured interviews with key decision-makers.

Results: Results show implementation dynamic and strategies being highly influenced by local context. Our key findings first point to the high significance of territorial boundaries for local actors, who opposed mergers when they implied the given institutionalised geographical boundaries be redefined. Second, past mergers experiences also weighted in. Previous conflicting mergers experiments impeded the implementation of the new organizational model, whereas past experiences with more consensual, non-merger forms of organizational integration facilitated the transition. In the end, even after the mergers took place, health care institutions’ missions showed resilience and therefore integrated at different paces in each territory.

Discussion and conclusion: The practices described in our research shed light on a resistance logic which generates conflicts mediated through negotiation and compromise. This leads to conclude to the political nature of the merger’s implementation process, given that it meets the definition of politics, in both its objects and its action modes. Despite a strong legislative policy instrument and commitment by the central government, this study points to gaps between the initial policy choice and the final model adopted, and thus offers insights on the importance of considering local politics in the implementation of national health systems reforms.
Fred Martineau, London School of Hygiene and Tropical Medicine, United Kingdom
Abstract ID: 1742

Processes and Practices of Health System Resilience: Local Perspectives of Health System Resilience in Sierra Leone During and After the 2014-15 Ebola Epidemic

Co-authors: Fred Martineau, Melissa Parker, Kara Hanson, London School of Hygiene and Tropical Medicine

Background: The 2014-15 Ebola outbreaks in West Africa demonstrated the profound and pervasive health, economic, political and social consequences of an inadequate health system. Understanding how health systems, and societies more widely, can respond more effectively to major epidemics requires an analysis of the complex and locally constituted relationships and structures that link people, health systems and other locally important actors. Yet health system resilience, as it is currently constructed in global discussions and enacted through global policy institutions, is commonly framed in generalised rather than local terms. Without accounting for the particular social dynamics that were so critical to the effectiveness or otherwise of formal and non-formal responses during the Ebola outbreak, current health system strengthening and preparedness efforts risk missing key determinants of effective responses to future health crises.

This presentation will analyse contrasting case studies of the process and practice of health system responses to adversity in Sierra Leone at the primary health facility level that explains how local, national and international actors, structures and resources produce key resilience practices at the local level.

Methods: The broader study from which these results are drawn involves twelve months of mixed methods case study research of primary health care facilities and nearby communities in three districts in Sierra Leone (Western Area Urban/Rural and Kenema District). Findings will draw on extensive participant-observation, in-depth interviews, focus group discussions and secondary epidemiological analyses conducted in each case study site.

Results: This presentation will look at three contrasting ‘trajectories of resilience’ at the primary health facility level, and the particular processes and practices that contribute to each trajectory. Resilience practices will be described in terms of the social and health system processes, relationships, logics and resources that shape and produce local understanding of, experience with and responses to adversity in different social, epidemiological and health system contexts.

Discussion: The discussion will conclude with an analysis of how health system resilience is ‘produced’ locally in each case facility, focusing in particular on the implications of common and contrasting features of local resilience practices at different sites for current health system resilience preparedness efforts.
Caroline Masquillier, University of Antwerp, Belgium  
Abstract ID: 507

HIV/AIDS competent households: the way in which a health-enabling context shapes community-based treatment adherence support for people living with HIV/AIDS in South Africa

Co-authors: Caroline Masquillier, Edwin Wouters, Dimitri Mortelmans, Brian van Wyk, Harry Hausler, Wim Van Damme, University of Antwerp; University of the Western Cape; TB/HIV Care Association; Institute of Tropical Medicine

Background: The size and scale of the HIV/AIDS epidemic has compelled South Africa to respond to the challenges faced by its health system by developing innovative means of delivering health care. Due in part to the opportunities offered by the mobilization around HIV/AIDS, the epidemic has served as a catalyst for a renewed focus on community health workers (CHWs) in South Africa. The community-based HIV support provided by such health workers has brought care closer to people living with HIV/AIDS (PLWHA) and his/her household. As the socio-ecological and the Individual-Family-Community models draw attention to the fact that the dynamic interplay with the household should be taken into account in order to study community-based HIV care comprehensively, the following research aim will be addressed: examining the way in which HIV/AIDS competence in the household hampers or facilitates the impact of community-based treatment adherence support.

Methods: During the participatory observations, 48 community based treatment adherence support sessions in patient’s houses were observed in a township on the outskirts of Cape Town, South Africa. Furthermore, 32 in-depth interviews were conducted with PLWHA, as well as 4 focus group discussions with 36 CHWs. By making use of Nvivo 10, the data was analyzed carefully in accordance with the Grounded Theory procedures.

Results: Despite the fact that the CHWs try to present themselves as not being openly associated with HIV/AIDS services, results show that the presence of a CHW is often seen as a marker of the disease. Depending on the HIV/AIDS competence in the household, this association can challenge the patient’s hybrid identity management and his/her attempt to regulate the interference of the household in the disease management. Moreover, the degree of HIV/AIDS competence present in a PLWHA’s household affects the manner in which the CHW can perform his or her job and the associated benefits for the patient and his/her household members.

Discussion: The research highlights the importance of community-based HIV care that is sensitive to the context in which it is implemented. This study also illustrates the need for community-based treatment adherence support which fosters the development of HIV/AIDS competence in the household. Insights such as these could guide future efforts to cultivate a health-enabling context and thus to provide sustainable support to PLWHA. This is essential, as antiretroviral treatment cohorts are likely to expand in the coming decades in a health system context of limited human resources.
Catherine Mathews, Health Systems Research Unit, South African Medical Research Council; Adolescent Health Research Unit, Division of Child & Adolescent Psychiatry, University of Cape Town, South Africa

Abstract ID: 914

Responding to the sexual, reproductive and mental health care needs of school-going adolescents. Results from an experimental school health service in South Africa

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Background: South African adolescents face a range of barriers accessing sexual, reproductive and mental health (SRMH) prevention and treatment services. This is despite attempts to increase access through youth-friendly clinic initiatives. The new national Integrated School Health Policy (ISHP) represents an opportunity to improve adolescent access to, and increase the responsiveness of adolescent health care in South Africa. Modelled on the ISHP, we offered a school health service (SHS) for Grade 8 students in 17 schools in the Western Cape. It aimed to provide an adolescent-responsive health assessment with a focus on identifying and assessing SRMH care needs and linking adolescents to relevant community-based SRMH services through referrals. Nurses from public clinics located near to the schools received training and provided the SHS once a week at school over a six-month period. We aimed to describe the SRMH assessments and referrals provided through the SHS; to explore whether the SHS responded to the needs of adolescents and was acceptable to service providers; to calculate the unmet need for referrals among adolescents at risk for adverse SRMH outcomes.

Methods: We surveyed participants, who were in the intervention arm of an HIV prevention trial, before and six months after the SHS implementation and we reviewed SHS records. We anonymously linked survey data with SHS records for the calculation of unmet need. We conducted in-depth interviews with the nurses providing the SHS.

Results: All 1549 trial participants were invited to use the SHS and 302 (19.5%) visited it. Those that visited the service (mean age 13 years) rated it as helpful. School nurses valued the opportunity to identify and support distressed adolescents and to answer questions about and give education on sexual health, but did not perceive the adolescents to need further SRMH services. The nurses recorded referring <1% to SRMH services. In the baseline survey, 9.6% of adolescents using the SHS had reported recent suicidality, 10.6% rape, 9.3% sex, and 4.6% unprotected last sex. These adolescents potentially needed referrals to SRMH services, but only 2.6% were referred by the school nurses.

Conclusion: In the current context regulations forbid the provision sexual and reproductive health services and commodities at schools, and it is not feasible to for school nurses to provide full mental
health services. The findings can therefore inform a more responsive strategy to ensure adolescents needing SRMH care are identified through SHS and linked into care at services outside the school.
Kaaren Mathias, Emmanuel Hospital Association, India and Umea Universitet, India
Abstract ID: 1178

“We sit and listen to each other” A qualitative study of strategies of Indian women to build community mental health competencies in Dehradun district, Uttarakhand

Co-authors: Kaaren Mathias, Nicola Gailits, Isabel Goicolea, Pooja Pillai, Lisa Schwartz, Emmanuel Hospital Association, India and Umea Universitet; McMaster University, Canada; Department of Epidemiology and Global Health, Umea Universitet; Emmanuel Hospital Association; Faculty Clinical Epidemiology and Biostatistics, McMaster

Purpose: Mental disorders are one of the leading causes of years lived with disability, yet fewer than 10% of people with common mental disorders (CMDs) in India have access to care. This emphasizes a clear priority for communities who can work collectively to facilitate more effective prevention, care, treatment and advocacy in mental health (community mental health competence). This study, set in Uttarakhand in Northern Indian, investigates processes of building knowledge, safe social spaces, and partnerships for action and health promotion taken by groups of women with CMDs in communities in rural and semi-urban Uttarakhand. Research is locally based with co-authors KM and PP long term residents in Dehradun.

Focus/Content: The study was set in three communities (rural, urban and semi-urban) in Dehradun district, Uttarakhand where Burans, a partnership project of four non-governmental organisations, has been working. Burans works collaboratively with alongside communities to improve mental health by supporting community organisations and community dialogues on mental health, facilitating access to care, and supporting families with psycho-social disabilities. Eight focus group discussions were held with members of ‘self-help groups,’ comprised of women primarily with CMDs, with additional participant observation by co-investigators. Ten key informant interviews (KII) were also conducted with local health care providers and community members. Translated transcripts of discussions were analysed deductively using an adapted model of community mental health competence focussing on Knowledge, Safe Social Spaces and Partnerships for Action (see Appendix One).

Significance for the field-building dimension of relevance: This research emphasizes the importance of prioritizing the health of marginalized and vulnerable communities with a focus on gender and health equity. The innovation in this research is that it analyzes and articulates learnings and outcomes from new community-based actions for improving mental health that build on local resources. This research offers community-based solutions in low-resource contexts as a first step towards improving health system responsiveness and resilience while providing access to care.

Greater mental health competence and control may empower women to contribute to household and community decisions, and participate economically. Understanding community models for women to improve their mental health by increasing their agency and control creates communities that have the ability to advance their own health and social interests.
It also provides integrated knowledge translation to the only community mental health project in Uttarakhand state, and feeds into ongoing project actions to improve the project’s self-help and support groups.
Fred Matovu, Makerere University, Uganda
Abstract ID: 1690

Differences in quality of care for maternal health services in the private and public facilities following a social franchising programme in Uganda.

Co-authors: Fred Matovu, Alex Aliga, Loveday Penn-Kekana, Andreia Santos, Makerere University; Policy Analysis & Development Research Institute; London School of Hygiene and Tropical Medicine

Background: The private sector is emerging as an important provider of maternity and antenatal care (ANC) services in Uganda, but there is limited empirical evidence on whether the quality of these services varies between private and public sector facilities. Access to quality maternity care is an important predictor for maternal and neonatal health outcomes, particularly in low-income countries. This study investigates the difference in quality of care received by women at public and private facilities and across socioeconomic groups.

Methods: Using data from a purposively selected sample of 760 mothers from 14 districts who received either ANC or delivery services or both from private health facilities in a social franchising programme to improve quality care, we investigate the difference in quality of care received by women at social franchising private facilities and at public facilities and explore whether these differences are related to individual socioeconomic characteristics. A structured questionnaire based on the recommended WHO guidelines for antenatal and maternity care was used to collect quality of care data from women who received maternal care at private and public Ugandan health facilities. The survey was conducted between July-September 2015.

Findings: The private sector was reported to provide better quality of care on indicators related to routine ANC procedures, essential obstetric examinations and essential maternal health procedures. The private sector was reported to perform better on indicators related to post-partum monitoring and counseling. The proportion of women who reported receiving quality ANC services BP, urine, ultrasound and HIV testing; weighing the woman, measuring foetal heartbeat; identifying signs of pregnancy complications, providing advice on nutrition, breastfeeding was 5-10 percentage points higher in private than in public facilities. Women who delivered at private facilities were more likely to receive fundal massage during delivery; be checked for heavy bleeding after delivery, receive iron/folic acid supplements, ambulation, have their baby wrapped in a cloth immediately after delivery, and counseled on family planning. Poorer women were more likely to receive lower quality for ANC and delivery in private facilities but not in the public sector.

Conclusion: Women receiving ANC and delivery care at private facilities obtained better quality of care than those at public facilities. However, access to quality maternal services in the private sector remains inequitable. There is need to improve maternal health practices in the public sector where majority of women, especially the low-income group, seek care.
Chieko Matsubara, National Center for Global Health and Medicine, Japan  
Abstract ID: 1848

**Deliberative process on the national health insurance benefits package in Japan**

Co-authors: Chieko Matsubara, Osamu Utsunomiya, National Center for Global Health and Medicine

The Japanese national health insurance benefits package is revised every two years by the Ministry of Health, Labour, and Welfare. Japan take fee-for-services as a provider payment system. In an aging society, medical needs have been increasing, and increasing medical costs for chronic diseases as opposed to infectious diseases are being shared. Revisions are being conducted to foster the efficient utilization of limited medical resources to enable people to receive appropriate, high-quality medical care funded by affordable payments. Literatures are reviewed to find key points and the key points are categorized based on its characteristics.

The current revisions contain a number of key points in health purchasing: 1) More funds were allocated for areas where enhancement was necessary, e.g. cancer care with palliative care, mental health care, and dementia care. 2) Incentives were provided for hospitals’ efforts to achieve high-quality medical care with safe and low-cost for patients. For example, incentives are allocated for hospitals which provide required criteria to prevent hospital-acquired infections. Another example is that incentives are allocated for pharmacies which provide generic medicines more than the specific rates among their stock medicines. 3) Relatively higher rates were provided for efforts to improve hospital workers’ working environment. For example, an extra (double) fare is paid for operative treatments and other high-cost treatments if provided on holidays, night time and late-night. Relatively higher rates are paid if assistants conduct medical doctors’ clerical work. 4) A differentiated benefits package has been devised for patients’ acute phases, convalescence phases, and chronic phases. Since 2014, when convalescence phase treatments are provided at acute-phase wards, the discounted payments are reimbursed to the hospitals. Furthermore, incentives are paid for cooperation between hospitals and homecare providers so that elderly people are to be continued living in home and their communities.

In anticipation of the medical needs to be provided for over the next 10 years, the deliberative board conducted the revision of the benefits package so that even in a super-aging society, the necessary medical care will be provided by the health insurance scheme.
Cristina Mattison, McMaster University, Canada
Abstract ID: 3117

Understanding the role of midwifery across health and political systems

Co-authors: Cristina A Mattison, John Lavis, Eileen Hutton, Michael Wilson, Michelle Dion, McMaster University

Background: Midwives’ role in sexual, reproductive, maternal and newborn health continues to evolve; understanding the role of the profession in health systems is important to support evidence-informed policymaking. Care provided by midwives who are trained, licensed and regulated according to international standards is associated with improved health outcomes and client satisfaction, as well as more efficient use of resources when compared to physician-led care. However, there is not a clear understanding of the role of midwives within the health system, which has contributed to significant jurisdictional variability that continues to challenge the profession. The purpose of this research is to develop a theoretical framework to understand the role of midwifery within different health and political systems.

Methods/design: We will use a critical interpretive synthesis approach to develop a theoretical framework. This inductive approach to literature analysis is particularly relevant to health-system policymakers and stakeholders as it uses conventional systematic review processes, but incorporates a broad array of policy-relevant evidence, including qualitative and non-empirical literature. This approach is particularly useful when there is a diverse body of literature that is not clearly defined, as is the case here.

Results: Our preliminary results suggest that: 1) models that include or are led by midwives can improve access to and continuity of care in health systems facing particular types of challenges; and 2) formally supporting the integration of midwifery into health systems is more likely in political systems without policy legacies that give a privileged role to physicians in policymaking and when there is evidence of widely shared values around patient choice and the demedicalization of childbirth. The full framework will be finalized well before the conference.

Conclusion: Any changes to the role of midwifery in health systems should consider the nature of the health system in which they are being integrated and the political system within which decisions about their integration will be made. Our framework will help to inform such changes.
Susannah Mayhew, London School of Hygiene & Tropical Medicine, United Kingdom  
Abstract ID: 2873

**Governance and Adaptation of Inter-Sectoral Health Systems: A research agenda to advance climate-adaptive, resilient health systems**

Co-authors: Susannah Harding Mayhew, Johanna Hanefeld, London School of Hygiene & Tropical Medicine

Background and purpose: Health systems are affected by, and must adapt to, global environmental change (GEC) yet virtually no research has focused on how health systems, as complex adaptive systems, must integrate adaptation and mitigation into core functions.

This paper examines multi-disciplinary examples of adaptation and mitigation responses in core health systems components, at various scales, and advances a health systems research agenda.

Data sources and methods: We use two health systems frameworks, WHO’s ‘Building Blocks’ and World Bank’s ‘control knobs’, and draw on systems thinking and complexity theory. For each likely GEC impact and health systems component, we considered necessary mitigation and adaption responses, identifying promising examples. Our analysis was triangulated and expanded through consultation with global researchers from fields including health systems, water, sustainable energy, environmental health, and law.

Content and main conclusions: Adapting health systems to GEC is primarily a challenge of people-centred governance. GEC poses challenges that link health systems with other sectors within and beyond national jurisdictions. Protection of health and equity therefore lies in involving health systems in new constellations of multi-level intersectoral governance structures, from global protection of public goods to locally responsive decision-making, learning from existing models from the UN’s humanitarian cluster approach and disaster risk-reduction. Implementation and policy research is urgently needed to determine how health system adaptive-mitigative capacities can be best strengthened through such governance structures. Securing political will (and financing) through analysis and communication of co-benefit scenarios is crucial. Health management information systems must use data from multiple sectors to improve disease surveillance, demographic projections, and integrated planning. The latter includes provision of green, climate-safe infrastructure and a systems workforce competent to analyse, manage and implement adaptive health systems. Documentation, testing and evaluation of integrated systems is essential, including research on decision-making and priority-setting.

Significance for theme area and target audiences: In the era of Sustainable Development Goals and dominant climate-related targets, health systems and health systems research must re-conceptualise what health systems “resilience” means. We map out how health systems could be reconfigured to connect to the much wider range of sectors and players that are now important for promoting sustainable, resilient health systems in a context of increasingly uncertain climatic changes triggering
changing disease geographies and human migration patterns. This is one of the first attempts to do so in a currently neglected field of work.
Knowledge translation in West Africa: A deliberative dialogue on road traffic injuries in Burkina Faso

Co-authors: Esther Mc Sween-Cadieux, Christian Dagenais, Emmanuel Bonnet, Valéry Ridde, Université de Montréal; Université de Caen

Contexte : Les ateliers ou dialogues délibératifs, de plus en plus utilisés sur le continent africain, représentent une des avenues possibles pour créer l’interaction nécessaire pour favoriser le transfert des connaissances et l’utilisation de la recherche. Ces ateliers permettent de regrouper les chercheurs, les décideurs, les praticiens, les ONG et les représentants de la société civile. Selon Lavis et al. (2009), «les dialogues délibératifs permettent de regrouper les résultats de recherche avec les perspectives, expériences et connaissances tacites de ceux qui seront impliqués dans — ou affectés par — les décisions à venir sur un enjeu prioritaire».

Suite à une recherche-action réalisée par l’Institut de recherche pour le développement (IRD) à Ouagadougou qui avait pour objectif de cartographier tous les lieux des accidents de la route dans la ville ainsi que de documenter la prise en charge des blessés, une journée de restitution sous forme d’atelier délibératif a été organisée en novembre 2015. Le but de cet atelier était de réunir tous les acteurs impliqués dans le domaine de la sécurité routière afin de leur présenter les résultats de la recherche, de proposer des recommandations pour améliorer la situation et de créer un plan d’action concerté.


Discussion : Bien que le format interactif de l’atelier ne soit pas la norme pour une journée de restitution au Burkina Faso, des initiatives comme celle-là devrait être répétée afin de maximiser l’implication des différents acteurs et ainsi espérer une plus grande utilisation des résultats de recherche.
Rosalind McCollum, Liverpool School of Tropical Medicine, United Kingdom
Abstract ID: 2493

Exploring the impacts of decentralisation on health equity in Kenya: Service availability and access, reaching the marginalised, quality, and community demand

Co-authors: Rosalind McCollum, Lilian Otiso, Robinson Karuga, Charity Tauta, Sally Theobald, Tim Martineau, Miriam Taegtmeyer, Liverpool School of Tropical Medicine; LVCT Health; Community Health and Development Unit, Kenya Ministry of Health

Background: Kenya transferred responsibility and authority for planning, budgeting and providing health services to 47 locally elected county governments in 2013. Introduced as a means to address inequities, decentralisation will not necessarily do so without the expressed commitment of county level health planners and service providers to address and monitor access, use and quality of health services for all, including marginalised groups.

Methodology: We collected qualitative data through 81 in-depth interviews with decision makers at county and sub-county level and service providers from community, dispensary, health centre and subcounty hospitals from three purposively selected counties (urban, rural agrarian and rural nomadic). 14 interviews were conducted at national level with Ministry of Health and partners. We sought to understand the implications of decentralisation for health equity and solicit recommendations for more equitable and responsive approaches across the health system. Qualitative data were digitally recorded, transcribed and coded before thematic framework analysis.

Results: Participants at county and national level frequently described inequity in the availability of services (including health) as being one of the drivers for decentralisation. Respondents at community and health facility levels typically described a mixed picture regarding the impact of decentralisation on health equity. In some counties decentralisation has brought commitment to expand the availability of health services by building and/or upgrading health facilities and increasing services provided e.g. adding maternity services for previously under-reached populations. However, access to health services for the most remote and hard to reach populations was reduced as a consequence of slow and reduced payment of funds to sub-counties and health facilities limiting their ability to provide outreach to remote populations. While infrastructure had improved, this was not consistently accompanied by a commitment to quality with lack of equipment, staff, drugs and commodities, which undermined equity. Furthermore, use of facility level services was unchanged and respondents described limited/no community level demand generation activities.

Conclusion: Three years following decentralisation in Kenya, a mixed picture is emerging of its influence on equity of health services. The constitution describes equity and social justice as guiding health governance principles along with ensuring everyone has the right to the highest attainable standard of health. In practice the counties studied have taken steps to address the availability of services, but have
not yet adequately increased demand and use of those services amongst marginalised groups or ensured quality of health services.
Estimating Routine Nursing Care: Supplementing the Workload Indicators of Staffing Need Tool With a Time-Motion Study in Namibia

Co-authors: Pamela McQuide, Maritza Titus, Bertha Katjivena, IntraHealth International; Ministry of Health and Social Services, Namibia

Background: Support to Namibia’s government to absorb PEPFAR-funded health workers coincided with a Ministry of Health and Social Services (MoHSS) restructuring effort to reset staffing norms. The MoHSS requested assistance from IntraHealth International to estimate staffing requirements based on actual workloads to support evidence-based decision-making. IntraHealth used the World Health Organization’s Workload Indicators of Staffing Need (WISN) tool, focusing on doctors, registered nurses, enrolled nurses, pharmacists and pharmacist assistants. However, additional information was needed to disaggregate nursing activities between registered and enrolled nurses and to further estimate routine nursing activities not covered by routine service statistics. IntraHealth undertook a time-motion study to determine the time for each sub-activity that constitutes routine nursing care for self-care and high-dependent patients. This represents the first documentation of how to deal with routine nursing care using the WISN method.

Methods: An expert working group distinguished between activities within routine nursing care for self-care patients and high-dependent patients in normal wards. Seven district and five intermediate hospitals in seven regions conducted a self-administered time-motion study to determine the time taken for each activity. Each facility collected data from two wards and four patients per ward covering day and night shift for self-care patients, and two wards and two patients per ward covering day and night shift for high-dependent patients. Establishing activity standards for routine nursing care from the time-motion study made use of health service statistics possible for determining workforce requirements.

Results: Average time spent on routine nursing care within a 24-hour period was six hours for high-dependent patients and two hours for self-care patients. General wards had a ratio of one-third high-dependent patients to two-thirds self-care patients. Time spent for admission and discharge was two hours per patient, and time spent for death/last office amounted to 105 minutes per patient. It is important to note that the addition of the routine nursing care activities had a significant upward impact on the staffing requirement for nurses. Overall analysis shows that Namibia has a shortage of nurses; only 61% of required nurses estimated by WISN are working.

Discussion/Conclusion: Incorporating a time-motion study is one way to estimate routine nursing care in WISN where there are no routine service statistics. Since routine nursing care is inadequately represented in service statistics, previous results underestimated the staffing requirement for nurses.
The Namibia time-motion study allows standardization of routine nursing care activities that may be applicable to other countries.
Jeffrey Mecaskey, Health Partners International, UK
Abstract ID: 3400

Results Based Financing & Universal Health Coverage: Evidence from Northern Uganda

Co-authors: Jeffrey Mecaskey, Solome Bakeera, Graham Root, Paula Quigley, Bridget Brown, Health Partners International; Montrose International

Background: As Results-Based Financing (RBF) attracts increasing attention as a key strategy to improving quality as well as increasing efficiency and accountability in health service delivery, there is growing interest in how it can be leveraged in driving Universal Health Coverage. Key issues revolve around how RBF approaches are contextualised and how they affect provider behaviour in services delivery.

Methodology: Undertaken in Northern Uganda to assess the costs and benefits of RBF versus Input-Based Financing (IBF), this this prospective cohort study matched Private-Not-For-Profit Provider health facilities by key criteria in both arms of the study. Inputs including credit lines for medicines and financing for services were matched to isolate any main effect associated with funding modality. Health System Strengthening (HSS) was tailored to the needs of each arm, but was kept comparable in terms of investment. In addition to working with District Health Teams (DHTs) in quarterly monitoring of key indicators across both arms of the study, a set of sub-studies were undertaken related to essential medicines management; quality of care; and data management, verification and reporting.

Results and Conclusions: Although there was generalised improvement in key indicators in adherence to protocol in the management of the major childhood killers—diarrhoea, malaria and pneumonia in both arms of the study, there were significant improvements in a range of key indicators in the RBF facilities relative to the IBF facilities.

In RBF versus IBF, a child was: Three times more likely to be treated correctly for malaria Almost seven times more likely to be treated correctly for pneumonia Over eight times more likely to be treated correctly for diarrhoea

The level of main effect in terms of quality of care was differentiated by level of institution. The strongest improvements in quality of care was observed in lower level facilities. Indicators related to both utilisation and supply of essential medicines similarly showed the most improvement in the lower level facilities in the RBF arm.

Systems theory provides a basis for framing why less complicated, lower facilities would achieve a tipping point for delivering “good enough” services in these fairly simple clinical practices relative to more complicated secondary and tertiary facilities. Give the persistent levels of disease burden associated with these conditions, and that fact that access is a principle determinant of utilisation, evidence of better quality of care and increased use of lower level facilities could have significant implications for achieving UHC.
Arnaldo Medina, Hospital El Cruce/Universidad Nacional Arturo Jauretche, Argentina  
Abstract ID: 1933

Determinantes políticos-sanitarios y organizacionales en la construcción de redes de servicios de salud, desarrollos e innovaciones de gestión para la integración sanitaria. Experiencia en Argentina.

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El análisis propuesto en este trabajo abordará las relaciones entre las dimensiones políticas, sanitarias, económicas, territoriales y de gestión que conforman al modelo de servicios de salud en red implementado en el Hospital El Cruce Dr. Néstor Carlos Kirchner (HEC), Provincia de Buenos Aires, Argentina. Este Hospital se ubica en el cuarto lugar entre mejores hospitales públicos de alta complejidad en América Latina y es referente en la Región reconocido por OPS-OMS. Desde este anclaje, se propone el siguiente interrogante: ¿Cuáles son las dimensiones políticas, sanitarias, económicas y territoriales del macro entorno y las dinámicas a nivel institucional que intervienen en el proceso de construcción de un modelo de gestión hospitalaria en red?

En relación a dicha pregunta-problema, se han formulado un conjunto de hipótesis de trabajo:

I) El modelo de redes representa una estrategia sanitaria que solo puede desarrollarse dentro de una matriz política que le otorgue factibilidad: material, tecnológica, social, económica, jurídica; II) El trabajo en redes de servicios de salud representa un esquema superador de la fragmentación jurisdiccional-prestacional del sistema de salud; III) El trabajo en red requiere del fortalecimiento de los nodos, es decir de los sistemas locales; IV) El trabajo en red da cuenta de redes preexistentes, en la red externa (servicios), en la red interna (trabajadores) y en la red comunitaria (usuarios).

Estas hipótesis se expondrán desde tres planos de abordaje: Conceptual; Operativo (la experiencia del HEC como estudio de caso); y Analítico/ Metodológico ya que se presentarán herramientas y matrices de análisis pertinentes para contribuir a la construcción y evaluación de redes de salud.

Se espera contribuir, a partir de la experiencia concreta desarrollada y de sus categorías de análisis, al debate sobre redes integradas de servicios de salud como esquema superador de la fragmentación de los sistemas de salud, considerando que el caso del HEC resulta relevante como experiencia concreta de implementación por sus impactos sobre la accesibilidad, la continuidad y integralidad de la atención sanitaria en nuestra Región.
Sustainability of learning for health systems development in contexts of changing government political priorities: experience from Nigeria

Co-authors: Tolib Mirzoev, Enyi Etiaba, Bassey Ebenso, Benjamin Uzochukwu, Ana Manzano, Obinna Onwujekwe, Reinhard Huss, Nkoli Ezumah, Joseph Hicks, James Newell, Tim Ensor, University of Leeds; University of Nigeria Enugu Campus

Learning from complex health systems interventions typically requires several years. However, what happens with such learning if a government-funded programme is suddenly stopped? We will share our experience of facing such situation in one research programme in Nigeria, our approach for engaging with key actors in discussing the continuity of learning for policy and practice, and key lessons learned.

This presentation should be of interest to three groups of research actors, who are typically affected by changing political contexts: researchers interested in longer-term evaluations; policymakers interested in continuous learning for improving policy and practice; and funders promoting longer-term learning approaches.

In 2012, the former President of Nigeria, Goodluck Jonathan, launched the Subsidy Reinvestment and Empowerment Programme (SURE-P) to invest revenue from fuel subsidy reduction into a social security programme. One component focused on maternal and child health (MCH). It included deployment of midwives and community health workers (CHWs), improving infrastructure, supplies, and strengthening governance. Conditional cash transfers (CCTs) were given to pregnant mothers for uptake of MCH services, and to CHWs for accompanying women to health facilities.

Following the high interest from policymakers, in June 2015 we started a five-year realist evaluation to assess the MCH component within its context in Anambra State. However, in October 2015 the new President Muhammadu Buhari announced withdrawal of government funding to SURE-P. This was a political decision, effectively dissolving a flagship programme of the previous government.

Despite this, the interest from Nigerian health officials in learning lessons for improving MCH remained high. We had engagements with Federal and State health authorities and our funder (UK Medical Research Council) to identify the best course of action for our research. Options were discussed, including stopping or amending the programme, as well as their technical and political implications from the different (policymakers’ and the funder’s), perspectives. The decision was to focus research on sustainability of achieved changes within the current context, to facilitate continuous learning.

In our experience, the challenge of long-term learning within the context of changing political priorities is not unique to Nigeria, and applies to many developing and indeed developed countries. This presentation will reflect on the processes of our engagements with key actors, including main lessons learned to ensure continuous learning for health systems development. We identify transparency, openness and continuous communication as the key principles to ensure effective engagement and dialogue between researchers, policymakers and research funders facing similar situations.
Determinants of polypharmacy and antibiotic co-prescription with antimalarials in a rural Tanzanian private hospital setting

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Background

Tanzania is facing challenges in ensuring appropriate use of medication. Whilst there are standard clinical guidelines for the types and doses of medication prescribed to patients, they are not always adhered to, leading to inappropriate or irrational use (Shankar 2009). Irrational drug prescription, mainly over-prescription and unnecessary prescription of antibiotics, may not only lead to inefficiency in health resource allocation, but may also result in the exacerbation of patient health through adverse drug interactions and the potential development of drug resistance (Ambwani and Mathur 2006).

Methods

A case study was conducted to identify determinants of polypharmacy and antibiotic co-prescription with antimalarials in a private mission hospital of Ulanga District, Tanzania. Drug prescription data from the year 2014 were extracted retrospectively from hospital records. Two samples were drawn, including (i) 609 patients in general; and (ii) 614 patients prescribed with artemisinin-based combination therapy (ACT). Multivariable logistic regression was used to identify factors associated with polypharmacy (four or more drugs) and antibiotic co-prescription with ACT.

Results

From the general sample, a total of 1474 drugs (all types of drugs, including antibiotics) were prescribed, deriving a mean number of drugs per encounter of 2.42 (i.e. 1474/609) with a minimum of 1 and a maximum of 6 drugs per prescription. Antibiotics were prescribed in 369 encounters (369/609, 60.6%). The 95% confidence intervals for both drug-prescribing indicators did not overlap with ideal ranges. The prevalence of polypharmacy was 11% (69/609) and, among the 614 ACT-prescribed patients, antibiotics were co-prescribed to 40% (246/614) of the sample. Both polypharmacy and antibiotic co-prescription with ACT were negatively associated with health workers having three or more years of experience (OR = 0.51, 95% CI: 0.29 – 0.88 and OR = 0.43, 95% CI: 0.29 – 0.62, respectively).

Discussion/conclusions

Careful monitoring using spot-checks, target-oriented training related to drug prescription and adequate staff supervision are needed, in particular for less experienced members, in order to improve the rationality of drug prescription and to protect patients’ health. Attractive benefit packages would help retain more experienced Clinical Officers. This may be particularly relevant for private mission hospitals with rapid turnover, as they often lose experienced medical staff to the public health sector, which offers better financial security. Further in-depth research, including qualitative studies to investigate the reasons underlying over-prescription, may be needed to
corroborate the findings and to assist decision-making within hospitals moving towards increasing rationality of drug prescription.
Public-private partnership and health system building approach towards improving RMNCH status of pastoral areas: The case of Reproductive Health Innovation Fund Grant

Co-authors: Abiy Hiruye, Mengistu Asnake, Julia Monaghan, Minal Rahimtoola, Pathfinder International

Ethiopia has made laudable achievements in improving the health status of its population. The Health Extension Program (health extension workers are salaried community health workers) remains the flagship of the national health strategy. However, health disparities exist between urban and rural populations, between regions and among vulnerable groups such as pastoralist communities and youth. Pastoral areas, estimated to be 60% of the total land of the country and around 13% of the total population, have the lowest reproductive maternal and child health indicators. For instance, the total fertility rate in Somali, one of the pastoralist regions, is nearly double the national rate at 7.3. This called for public and private partnership in piloting and scaling of tailored, high-impact interventions and aligning them towards building the health infrastructure of the pastoral areas.

The Federal Ministry of Health (FMOH), through the support of the UK Department for International Development (DFID), currently leads the Reproductive, Maternal, and Neonatal Health Innovation Fund (RIF)—specifically targeting the pastoralist areas to address these disparities. RIF activities are led through FMOH subawards to local civic and faith-based organizations, regional development associations, and local universities. Pathfinder International, selected by DFID as a technical assistance supplier, supports both the FMOH and RIF sub-recipients on effective and equitable distribution of funds and implementation of activities to strengthen health system responsiveness to underserved pastoralist populations.

Targeted support to the health system infrastructure in the pastoralist districts, through FMOH subawards and Pathfinder technical assistance, has resulted in important advances in health system capacity. This has been augmented by project support for joint supportive supervision visits between the FMOH and local implementing partners. Previously “silent districts” are now reporting through national health information systems as a result of grassroots initiatives. Non-functional health facilities have been restored to providing services through procurement of solar lights and water reservoirs, and placement of personnel.

Further, newly cognizant of the systemic nature of the challenges facing the pastoralist population, the FMOH has developed an equity plan to revitalize the health system structures across the pastoralist regions, in line with the WHO’s health systems building blocks.

The RIF, along with Pathfinder support, has positioned the FMOH to meet set targets, ultimately contributing to equity through addressing demand and supply. Complementing the government-led initiatives, strategically aligning the innovations to the equity plan the FMOH and partnering with sectors outside of health is pivotal to achieving equity.
Shinjini Mondal, Public Health Foundation of India, India
Abstract ID: 2732

**Doing embedded research in HPSR? Valuing partnership, reflexive practice, diverse outputs are essential**

Co-authors: Shinjini Mondal, Sureka Garimella, Kerry Scott, Asha George, Rajani Ved, Kabir Sheikh, Public Health Foundation of India; John Hopkins School of Public Health; National Health Systems Resource Centre

**Purpose:** Transformative change and strengthening health systems is central to Health Policy and Systems Research (HPSR). HPSR thrives on embedding the research process within a network of health system actors and stakeholders. The practice of HPSR survives on building partnerships, fostering exchange and dialogue with moral and ethical grounding in mutual respect and space. Bringing together diverse actors also poses challenges due to hierarchy, institutional priorities, experiences and political ideologies. We share the our experience of doing HPSR and offer some suggestion in overcoming complexities and putting research into policy and practice.

**Content:** We share our experience of doing an implementation research study for 1.5 years in a Northern state in India focused on strengthening Village Health Committees and drawing scaling up lessons. We worked with a range of stakeholders, national and provincial departments, local level non-governmental organization and researchers with multi-organisational affiliations. We initiated the study, beginning with setting the research agenda through a workshop involving all partners. It derived common understanding on research design and process among partners and co-evolved implementation plan for the study with help of implementation partners. The role of working together to build consensus and moving away from lone thinker mode sets the stage for HPSR research. Constant and ongoing communication between stakeholders through progress updates, meetings, consultations and workshops served as key to gain mutual trust. Next phase of moving into field, focused on contextual learning and reaching a fine line of balance in being adaptive to reality settings and maintaining rigour in the research method. We documented the processes and rationale for adaptation in detail. Researchers were based at field site and closely followed the implementation cycles, where reflexivity served as cornerstone for the whole process and kept the researchers aware of their position. Finally during project dissemination phase, diverse outputs were developed to suit each partner requirement and ranged from developing technical report for donors, refined scaling up document and institutional package for policy makers and local language dissemination outputs for provincial government. Presence of experienced HPSR researchers and practitioners on team enabled to frame and propose findings and recommendations.

**Significance for the sub-theme area/ Field-building dimension of relevance:** We demonstrate doing embedded context relevant, actor informed research enables systems to be more responsive and simultaneously equips them to strengthen itself and be resilient.
Target audience: Health system researcher, policy maker, donor
Tanvi Monga, MCSP/ICF, uni
Abstract ID: 2533

A systems approach to assessing viable, integrated community health systems: Findings from eight countries

Co-authors: Tanvi Monga, Eric Sarriot, Reeti Hobson, Emma Sacks, MCSP/ICFI; ICFI

Background: A community health platform (CHP) must be: viable (resilient and able to endure through time), integrated (providing comprehensive community health solutions), and adaptable (able to adapt to a range of needs). We reviewed the experience of five USAID’s Maternal and Child Survival Program (MCSP) country programs with significant community health investments, through a CHP lens to examine the extent to which these efforts evolve toward sustainable practices in community health.

Methods: Two independent researchers reviewed MCSP country program workplans in Bangladesh, Ethiopia, Ghana, Kenya, and Tanzania using a data extraction tool. Data extraction was followed by iterative discussions with country teams to clarify observations and findings related to the five dimensions of the CHP: (1) interventions and outcomes; (2) community health worker (CHW) workforce and community organizing; (3) local learning and adaptation; (4) institutionalization, governance and partnerships; and (5) health system support services and functions.

Results: Of the five components in the CHP, the interventions and outcomes dimension is the strongest across all five of the country programs. Each country supports evidence-based interventions at the community level and training of CHWs. However, the level to which a package of integrated reproductive, maternal, neonatal, child health (RMNCH) services is offered at the community level varies substantially. All of the countries except Bangladesh have a dual system for their community health workforce, with both paid community health workers (CHWs) and unpaid community health volunteers (CHVs). This dual system has the potential to ease the workload of CHWs and increase population coverage. Each country faces challenges with institutionalization, governance and partnership. While strong leadership often exists at national and sub-national levels, especially in Ghana, Ethiopia, and Tanzania, and MCSP brokers partnerships with local NGOs in Tanzania and Bangladesh, involvement of diverse partners, private or civil society, in coordination or implementation is rarely a central focus of decentralized governance.

Conclusions: Program efforts are observed in all dimensions of study of the CHP in the five countries, but not always explicitly or systematically considered. Most programs focus on service delivery, but additional efforts on mechanisms to ensure equitable services, and partnerships between government and other actors would strengthen the “offer” of community health.

Using the CHP to frame analysis of national community health programs provides a systems view for assessing how investments build sustainable platforms for Ending Preventable Child and Maternal Deaths as well as the Sustainable Development Goals.
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Abstract ID: 934

**Return on Investment From Childhood Immunization in Low- And Middle-Income Countries, 2011-20**

Co-authors: Sachiko Ozawa, Samantha Clark, Allison Portnoy, Simrun Grewal, Logan Brenzel, Damian Walker, Johns Hopkins Bloomberg School of Public Health; Harvard T.H. Chan School of Public Health; University of Washington; Bill & Melinda Gates Foundation

An analysis of return on investment (ROI) can help policy makers support, optimize, and advocate for the expansion of health programs in the world’s poorest countries. In order to harness the impactful message of the benefits that accompany investments in vaccination programs across the globe, we used a return on investment measure. This method of measurement can be well understood and used by professionals in all fields, especially by policy makers who require evidence to make financial decisions across sectors. We assessed the return on investment associated with achieving projected coverage levels for vaccinations to prevent diseases related to ten antigens in ninety-four low- and middle-income countries during 2011–20, the Decade of Vaccines. We derived these estimates by using costs of vaccines, supply chains, and service delivery and their associated economic benefits. Based on the costs of illnesses averted, we estimated that projected immunizations will yield a net return about 16 times greater than costs over the decade (uncertainty range: 10–25). Using a full-income approach, which quantifies the value that people place on living longer and healthier lives, we found that net returns amounted to 44 times the costs (uncertainty range: 27–67). Across all antigens, net returns were greater than costs. But to realize the substantial positive return on investment from immunization programs, it is essential that governments and donors provide the requisite investments.
Innovating to overcome human resource shortages in remote areas of Nepal: increasing access to care through increasing inequalities among nurses

Joanna Morrison, University College London, United Kingdom
Abstract ID: 2484

Innovating through local mixed methods approaches: increasing access to care among remote communities

Joanna Morrison, Rita Thapa, Regina Basnyat, University College London; Nick Simons Institute

Background: Recruitment and retention of health workers in rural areas is a problem more acute in low-income countries. Innovative systems approaches are necessary to overcome the challenges in providing care to the most marginalised in remote areas.

To address the maternal health needs of the most marginalised, the government of Nepal has encouraged the local recruitment of Auxiliary Nurse Midwives (ANMs) by the district and health facility, to fill human resource gaps and enable 24 hour service provision. We explore the effect of this policy on nurses and care provision.

Methods: We conducted mixed methods interviews with ANMs in 15 rural health facilities in three Districts in the west of Nepal. Two districts were purposively sampled as they had high numbers of locally contracted nurses, and one with less. We also examined attendance data and maternity registers. We conducted focus group discussions with the health facility management committee at each facility, and a local women’s group. We also interviewed supervisors, and central level stakeholders.

Results: All ANMs were female. In 77% of the health facilities where there were nurses hired on short-term local contracts, and nurses on permanent contracts, the short-term contract nurses conducted more deliveries. They also had worse terms and conditions, pay, leave and access to training. Often contract nurses worked 24/7. Nurses were motivated by a lack of job opportunities, and a willingness to learn and retain skills. ANMs from the local area were more comfortable providing care and were more likely to be retained. Nurses on short-term contracts had little job –security, with contracts being issued for a maximum of 9 months. All contract nurses sought permanent positions, and it is unlikely that they would be retained for longer periods of time in rural areas unless terms and conditions improve.

Discussion/conclusions: Driven by a need to improve maternal and newborn health in rural areas, and increase access to services among the marginalised, the government of Nepal has implemented an innovative way to address nurse shortages in rural areas, side-stepping the political challenges of recruiting more nurses on permanent contracts. Yet in doing so has introduced inequalities among nurses. Nurses are generally marginalised within health services, with very few taking up senior positions. Gender analysis is an important aspect of evaluating health systems interventions – while the government aimed to reduce inequalities in access; this resulted in further marginalisation of this female dominated workforce.
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Abstract ID: 1674

The Implementation of a Mobile Electronic Health Record Application for Community HIV Counseling and Testing and Antiretroviral therapy Services in Southern Province of Zambia

Co-authors: Mphatso Nyemba Mudenda, Bridget Mugisa, Annie Mwila, Idongesit Essiet-Gibson, Bwalya Chiteba, James B McAuley, Centers for Disease Control & Prevention, Zambia

Purpose: To describe the implementation of a community model of a mobile integrated electronic health record (EHR) application at two secondary level hospitals in the Southern Province of Zambia. This application is used by Community Health Workers (CHWs) to view and update individual patient medical records for HIV testing and treatment services provided in the community. The model supports the implementation of differentiated models of care as Zambia moves to HIV Test and Start and will be fundamental in strengthening linkages and documentation between community and facility.

Focus/content: SmartCare is Zambia’s national EHR, which supports clinical care and continuity of care by providing confidential portable health records of clients on a smart card that can be used at any facility where SmartCare is operational.

The community model of SmartCare was designed to reduce HIV infection and the transmission rate in communities, by having CHWs conduct home HIV testing and counseling (HTC) services while using electronic devices (Tablets) for patient record management. The system is being piloted at Macha Mission Hospital and Mtendere Mission Hospital since August, 2015; where 92 CHWs were trained in use of the HTC and STABLE ON CARE modules of SmartCare, as well as the use of tablets for data collection. From September to December 2015, 12,354 people were tested in the community, of whom 12,209 tested negative while 145 tested positive (1.17% positivity rate) and were referred to the hospital for treatment and care.

With the introduction of this community model, most of the CHWs are managing to reach their monthly targets of HTC clients (75/CHWs). CHWs are able to use the tablets with minimal challenges, and data synchronization at the respective facilities is done once a week. However, currently the system cannot distinguish community ART care patients from those in facility ART care; developers are working on it.

Significance for the sub-theme area: The use of Mobile EHR innovations can improve documentation of patient outcomes, monitoring for adverse events and efficiency within facilities as stable patients are transitioned to community services and facilities get decongested. CHWs can be supported in low resource settings, to provide clinical services in local communities, to improve access and continuity of care. Linkages between community and facility health systems are strengthened given synchronization of data with use of an EHR.

Target audience: People with interest in health systems strengthening, health informatics and disease surveillance in low resource settings.
Margaret Mugisa, Amref Health Africa in Uganda, Uganda  
Abstract ID: 3396

**Improving timely attendance of 1st ANC using collaborative quality improvement approach in rural health facilities in South Western Uganda**

Co-authors: Pascal Byarugaba, Margaret Mugisa, Patrick Kagurusi, Amref Health Africa in Uganda

**Context:** World Health Organization (WHO) recommends that all pregnant women should attend Antenatal care (ANC) at least four times before birth with the first being within the first 14 weeks of pregnancy. Utilization of ANC predicts many birth outcomes and several postpartum practices because of early diagnosis and treatment of general medical and pregnancy related complications. Despite free ANC services in public health facilities in Uganda, only 21% (UDHS,2011) of pregnant women attend first ANC visit in their first trimester. Amref Health Africa’s Saving Lives at Birth (SLAB) project implemented a quality improvement approach that sought to improve timely attendance of 1st ANC by pregnant women in eight health facilities for a period of one year. This study examines how the approach improved this maternal indicator.

**Description:** Thirty three health facilities were purposively selected from 100 SLAB supported health facilities to implement quality improvement (QI) approach in order to improve maternal and newborn health outcomes including attendance of 1st ANC within 1st trimester by pregnant women. The QI teams oriented and mentored health workers and communities on QI methodology, identified and prioritized MNCH gaps which among others included low attendance of 1st ANC in 1st trimester. Eight health facilities prioritized improving attendance of 1st ANC in 1st trimester as their projects. Strategies to close the gap included working with village health teams (VHTs) to identify pregnant women record and follow them up for referral and intensifying mobilization of communities on market days. This was unique as this was led by the communities. The primary predictor variable was implementation of QI tested change and the outcome variable was attendance of 1st ANC in the 1st trimester.

**Outcome:** A trend analysis of Health Management Information System (HMIS) data for one year showed an average increment in attendance of 1st ANC within 14 weeks of pregnancy from 25% to 38%. This result was linked to the tested changes implemented over a period of time and monthly meetings held to re-strengthen the changes.

**Lesson:** Collaborative QI approach can improve timely attendance of ANC visits if training in problem prioritization; continuous mentorship and meetings are done

**Key words:** Antenatal Care, Quality Improvement, maternal health
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Abstract ID: 3391

**Improving Postnatal Care uptake using service improvement strategies: a pilot study in rural health facilities in Kisoro District South Western**

Co-authors: Margaret Mugisa, Patrick Kagurusi, Pascal Byarugaba, Amref Health Africa in Uganda

**Context:** Postnatal care (PNC) within the first few days is a critical service that saves lives of mothers and infants. The Uganda Ministry of health guidelines prescribes that PNC should be delivered within six hours, six days, six weeks and six months. PNC uptake within 6 days remains low in Uganda as it stands at 33% at national level, while 18% in south western Uganda. This is despite the existence of guidelines on its implementation. Amref’s Saving Lives at Birth project piloted health facility service improvement in five health facilities whose aim was to improve the uptake of PNC service in Kisoro District.

**Description:** Working with district health teams through support supervision and using Health Management Information System data, PNC was identified as a poorly utilized intervention in five health facilities. A process involving problem analysis, goal setting and activity identification was done with health workers and community health workers (CHWs). Using tracking book (documentation journal) health workers set baseline and tracked progress of their projects from February to June 2015. The activities implemented included engagement of CHWs in health promotion and tracking mothers; documentation of PNC services, integration of other PNC services with immunization and creating awareness during ANC and Out Patient Department.

**Outcomes/ significance:** The results indicated improvement in uptake of PNC services, in health centers IIIs of Nyakinama (46.4 to 75%); Gateriteri (61 to 122%), Kagezi (0% to 52%), Kagano (26.5 to 47%) and Nyarubuye (25.6% to 33%), Bukimbiri (8.5% to 30.5%), Iremera (10.5 to 63.2%) and Nteko (0% to 44.1%). Focused engagement of health workers and CHWs through supervision, mentorship and monitoring using guidelines to track progress of their projects motivated them to achieve their goals.

**Lesson:** Engagement of health workers and CHWs using service improvement strategies such as problem analysis, solutions development and, integration of PNC and immunization services as well as effective documentation can greatly improve PNC uptake at health facility level.

**Key Words:** Postnatal Care, Utilization, Improvement, Uptake
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Abstract ID: 2083

How Does Community Engagement Improve Maternal and Newborn Health?  
An Empirical Study of 2H2 Referral System in Eastern Indonesia

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Background. Strong commitments to achieve substantial reduction in maternal and child mortality have been implemented in Nusa Tenggara Timur (NTT) province of Eastern Indonesia, in which mortality is still high. Since 2009, the MCH program so-called "Revolusi KIA" has been introduced with the main objective to safe mothers and newborn babies through health facility births. It involves a strong community engagement through an intensive health monitoring programs to pregnant women within 2 days (2H) before and 2 days (2H) after delivery, known as 2H2 referral system. It aims to mobilize communities in ensuring that the mothers would have safety births. Since its implementation, however, the achievement results vary within districts in NTT. To understand why in some areas remains suboptimal, we undertook a study in 2014-2015 with the support from the IRP-Implementation Research Platform WHO.

Methods. To identify maternal and child health issues in the region and how the community engage in supporting local health programs, information from both quantitative and qualitative sources was utilized. It included the 2012 Indonesian Demographic Health Survey, district health profiles, and routine data on MCH indicators. In-depth interviews were conducted to 111 informants including mothers, family members and health personnel; meanwhile 12 focus group discussions involved 161 mothers and family members, and 6 round-table discussions were participated by 47 local community stakeholders. To measure the level of community engagement in six selected districts in NTT, a framework of community engagement as introduced in WHO (1991) and recently modified in Farnsworth et al. (2014) was used.

Results. This study revealed that the community engagement in the selected districts in NTT was still in the early stages (i.e. outreach and consult). The higher level of community engagement (i.e. involve, collaborate and shared leadership) has significantly improved maternal and child health by mobilizing mothers and their families to use health facility and building partnership with the local governments. In terms of supporting the 2H2 system, the engagement was determined by four factors: awareness of the system, economic reasons, culture and traditional practices, and the availability and access to health facility.

Conclusions. There is a strong need to continue the 2H2 referral system to reduce maternal and child deaths which varied among regions. Accordingly, it requires the community continuous participation to influence health outcomes for maternal and child wellbeing. Specific recommendations are addressed to
assist NTT government for improving community engagement relating to maternal and child health outcomes.
Indranil Mukhopadhyay, Public Health Foundation of India, India
Abstract ID: 3305

Financing universal access to medicines: A low hanging fruit or a catalyst for health system strengthening?

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Background: Many developed and developing countries alike are grappling with the challenge of increasing health care costs while price of medicines and other essential commodities remain major cost drivers. Studies have revealed glaring gaps in needs and availability of essential medicines in public facilities in India, especially at the primary level (Lalvani P. et al. 2003, Kotwani A. et al. 2007; Cameron et al 2008). Cutbacks in public spending and squeeze in supply of essential commodities have pushed people towards household based financing system which is essentially characterized by inequity in access, impoverishment and catastrophic health care spending. Inspired by the autonomous and centralized procurement and decentralised distribution system in Tamil Nadu, some states have introduced a similar model, with varying success.

The main objectives of the study are the following: How effective medicines procurement and distribution systems in India in ensuring availability of medicines and providing financial protection; understand the efficiency gains in costs through a procurement system in comparison with market prices and study the possible pathways in health system strengthening.

Methods: The study uses variety of methods including analysis of secondary data sources like government budgets, medicine pass book data and NSSO as well as primary data collection from 617 government facilities spread across eight states. A list of 101 common medicines was used to assess availability of medicines. Procurement data and market prices, obtained from IMS were compared to assess efficiency gains.

Results: Among the study states, Tamil Nadu (81%) and Rajasthan (79%) have higher availability of medicines compared to states like J&K (38%) and UP (57%). A comparison of procurement prices and market price shows that weighted mean price to retailers (excluding the retailers’ margin) could be 300% higher in comparison to procurement prices across various Anatomic Therapeutic Categories, indicating significant potential for cost savings and efficiency gains.

Conclusion: Introduction of centralized and autonomous procurement and decentralised distribution system, complemented by a guarantee of free access, have potential to catalyze several other components of health system; bring-in overall improvement in system performance and lead to a system which is resilient to cost shocks if seen as an integrated whole rather than an one-off initiative.
Aaron Mulaki, RTI International, United States
Abstract ID: 1100

Looking towards incorporating social accountability into family planning

Co-authors: Alyson Lipsky, Erin McGinn, RTI International; Palladium

Background: Since the 2004 World Development Report, the field of international development has seen heightened focus on ensuring the poor and marginalized are included in policy and program making and monitoring processes, often through social accountability. However, in family planning (FP), adoption of social accountability has been limited as the FP community has historically focused on advocacy to advance sexual and reproductive health rights (SRHR) in both international fora and at the country level. Incorporating other social accountability approaches into FP program design and advocacy efforts may be a strategic next step to advancing SRH rights. HPP undertook a literature review on social accountability to analyze if and how other fields of social accountability could contribute to FP programming.

Methods: Peer-reviewed and non-peer-reviewed articles were included in the literature review if they addressed: the theoretical underpinnings for social accountability in health, links between social accountability and health or FP outcomes, project approaches to social accountability for health, results from social accountability for health outcomes. There were a total of 84 articles, reports, and other documents that met these criteria. The authors also interviewed select key informants.

Findings: The existing literature provides ample information on the conceptual and academic underpinnings of the field, and the current evidence base for outcomes and impact of social accountability approaches. The available literature can be grouped in three categories: citizen involvement in monitoring public services, influencing and monitoring financing, and collaborative planning/or management. While existing literature on social accountability lacks substantial documentation on the individual and organizational capacities and resources needed to effectively engage in various social accountability approaches, there are a number of synergies between FP programming and social accountability, beyond advocacy, that can be leveraged to strengthen FP efforts.

Conclusions: Several interventions commonly used in FP programs are amenable to incorporating additional social accountability approaches. For instance, methodologies for quality assurance/improvement could be expanded to systematically include client and community input. Monthly peer FP discussion groups among women, men, or youth could periodically invite government officials or health center managers to address health systems issues and barriers users may be experiencing. Finally, in FP programming we are forever looking for ways to address stock-outs and with SMS technology we can engage the community to report on method stock out, or other service quality issues such as provider absenteeism.
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Abstract ID: 1348

The shocks of devolution to healthcare purchasing arrangements in public hospitals in Kenya: Experiences of hospital managers and county ministry of health decision-makers.

Co-authors: STEPHEN KIKWE MULUPI, Kenneth Kabubei Munge, Jane Mumbi Chuma, KEMRI Wellcome Trust Research Program

Background: In 2010, Kenya adopted a new constitution that radically changed the system of governance, through devolution of power and resources. The new law mandates the national government to provide leadership in policy while the 47 autonomous local county governments are mandated to provide services. We report findings of a qualitative study exploring experiences of counties as purchasers of healthcare within 3 years of devolution.

Method: We purposively sampled 10 counties from central, coast, Rift Valley, and Western representing geo-political diversities and poverty levels. We purposively sampled key decision makers in the county governments (n=58) the health management teams. We reviewed official documents and conducted audio-recorded in-depth interviews. A key objective was to mechanisms of financial flows from national government to counties and finally to providers. Informed consent was obtained from all participants. Data was analyzed using thematic framework analysis.

Findings: There was widespread variability in healthcare plans across counties. Many respondents reported that they are still learning from each other.

Key improvements by county governments: Majority respondents report that devolution has significantly improved services. Observed changes include improved access to healthcare services, closer supervision of healthcare workers, faster decision-making, better local prioritization, wider variety of drugs; infrastructural developments in health facilities, equipment and enhanced ambulance services.

Key challenges to healthcare purchasing arrangements: Delayed disbursement of funds from national government to counties, inadequate budget allocation to the ministry of health, no access (by hospital managers) to user fees revenues generated by the hospitals hence constraining planning processes and responses to emergencies. Other challenges include shortage of staff especially in remote facilities, frequent health worker strikes, political interference to health workers’ roles and frequent drug stock-outs.

Most of the managers reported relying on goodwill from suppliers of essential commodities and utilities e.g. food, outsourced labor, fuel; to ‘remain afloat’. Frequently, future supplies are withheld till pending bills are cleared.

Discussion:

Devolution of healthcare to local county governments has immense potential to enhance purchasing of healthcare to citizens, strengthening local citizen participation in health plans and public accountability mechanisms. However bottlenecks in flow of finances poses serious challenges that undermine overall
access to healthcare services. Critical areas of improvement include adequate budgetary allocation to health, improving timeliness of funds disbursements from national government and authorizing hospital managers to spend user fees and better working relationships between the political decision makers and the hospital staff.
Zubia Mumtaz, University of Alberta, Canada
Abstract ID: 1500

**Good on paper: the gap between program theory and real-world context in Pakistan’s Community Midwife program**

Co-authors: Zubia Mumtaz, Adrienne Levay, Sarah Salway, University of Alberta; University of British Columbia; University of Sheffield

**Background:** Skilled birth attendance is acknowledged as a key strategy to reduce maternal deaths. This intervention has, however, had mixed results in different programmatic contexts. Some countries, like Sri Lanka, successfully reduced its maternal mortality rate, while others, like Indonesia, failed to achieve similar success. Pakistan launched a community midwife program in 2008. Evidence suggests this program is functioning sub-optimally. The objective of this study was to understand why an intervention that has been effective in some settings is failing in Pakistan, and to demonstrate the value of a theory-driven approach to evaluating implementation of maternal healthcare interventions.

**Methods:** Implementation research was conducted. Using an institutional ethnographic approach, data were generated at national program and local community levels. Observations, focus group discussions, and in-depth interviews were conducted with 36 CMWs, 20 policymakers, 45 health care providers and 136 community members. A critical policy document review was also conducted. This national and local level data were brought together to examine how the program theory aligned with real-world practice.

**Results:** Data revealed gaps between program theory assumptions and reality on the ground. The design of the program failed to take into account: 1) the incongruity between the role of the midwife and the dominant class and gendered norms that devalue the role of a midwife; 2) market and consumer behaviour that prevented CMWs from establishing private practices; 3) level of infrastructural development. Uniform deployment policies failed to consider existing provider density and geography.

**Discussion:** The data demonstrate the need for greater attention to program theory during design and early implementation of the interventions. By not articulating its program theory, the project failed to incorporate the ‘real-world’ setting into its processes that were essential for the program to meet its goals.
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Abstract ID: 1801  

Kenya’s Experience in Improving Health Workforce Management through Human Resources Training and Mentorship at County Government Level  

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Background: Kenya’s new constitution brought devolved health services to its 47 counties. Managing a decentralized health workforce of nearly 43,000 has posed challenges, with limited budgets to fund human resources management (HRM) and conduct activities like training, systems development, performance planning, and evaluation. Health departments in most counties lacked professional HR officers; when present, they often played no role in health workforce management. The USAID-funded Human Resources for Health (HRH) Capacity Bridge Project, led by IntraHealth International, worked to strengthen county-level HRM capacity through training and mentoring HR officers.  

Methods: In partnership with the Institute of Human Resource Management (IHRM), the project developed a mentorship process. Private, public and faith-based institutions in targeted counties were selected for the program. IHRM’s membership database identified mentors, who participated in a sensitization workshop that clarified roles and expectations. Mentors and mentees were paired based on mentees’ identified needs and mentors’ skills and availability. The mentorship process took seven weeks with weekly face-to-face mentorship sessions. Results  

The mentorship program demonstrated how public service can be improved through collaborative learning with private and faith-based institutions. The program achieved results in three areas: 1) counties strengthened HRM systems; 2) mentors expressed professional satisfaction and earned continuing professional development (CPD) points; 3) mentees developed new HR skills, set goals and developed processes to achieve them, and earned CPD points. County-level results included the following:  

Homa Bay County’s mentee established a disciplinary advisory committee, which makes recommendations to the county public service board. The mentee also identified conflicting roles among senior staff within the health department and guided the county to develop job descriptions for health management teams and referral hospital staff.  

Kisumu County’s mentee adapted the national performance appraisal guidelines and forms to the county context. After  

Siaya County suffered a massive exit of doctors, the mentee developed and implemented a staff exit questionnaire to inform appropriate retention strategies for doctors.  

Mombasa County’s mentee identified the need for a HRH strategic plan (launched in October 2015) to address issues contributing to frequent workforce unrest.  

Conclusion/Discussion: Although at nascent stages, effective management of health workers in the counties is taking root. However, standardization and sustainability must be anchored in sound policies
and guidelines. The mentorship program has proved a practical, solution-based approach to lasting results. Going forward it is critical to target top county leadership, many of whom make critical HR decisions yet lack HR skills.
LABAN MUSINGUZI, Makerere University Kampala, Uganda  
Abstract ID: 2161

Harnessing local resources to strengthening health systems in Uganda: lessons from informal transport providers in Luwero district, Uganda

Co-authors: LABAN KASHAIJA MUSINGUZI, Makerere University Kampala

Background: While it's well documented that the drivers of health system go beyond the formal health care systems, little is known about how local resources can be harnessed to strengthen the health systems. In this paper, I use the example of informal transport providers, motorcycle taxis that operate in rural Uganda, to show how they present an opportunity that can be harnessed to strengthen health systems and increase access to formal health care in Uganda.

Methods: Between 2012 and 2014, I lived in rural district central Uganda, participated in a range of health activities, conducted 91 interviews and 42 focus group discussions with adult community members. In addition, five interviews and three FGDs were held with informal transport providers called boda boda riders (motorcycle taxi drivers), and four FGDs specifically on the role of boda bodas in providing access to formal health care facilities were held with community members. Other participants included local government staff, local leaders, and nongovernmental organisation (NGO) staff. Data were analysed using thematic analysis.

Results: We found that boda bodas are used as community-based ambulances to facilitate access to health care facilities. They also act to strengthen facility to facility referrals. Community members use them because they offer flexible payment modalities, act as caregivers to the patients they transport, and are regarded in the community as 'one of our own'. They offer their services as part of the wider complex social interaction and reciprocity in the community. Such dynamics enable boda boda riders to provide services according to community expectations rather than for profit. The boda bodas also spread useful information between the health facilities and communities where they live. We found that the riders are directly accountable to the communities.

Conclusions: The findings suggest that Uganda’s health care system could be easily transformed into a people-centered health care system if existing local resources are effectively harnessed. Even without the support of external interventions, boda bodas are a sustainable social resource presenting an opportunity for improving access to health care in remote communities of Uganda. There is need to facilitate creation of a favourable policy environment. The informal transport providers could be trained in basic patient care skills to alleviate challenges of access to health care in rural areas of Uganda and help to strengthen the weak referral links in the already weak health systems.
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Abstract ID: 1732

Supporting youth and community capacity through photovoice: Reflections on participatory research on maternal health in Wakiso district, Uganda

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Background: Uganda continues to suffer from poor maternal health indicators with a maternal mortality rate of 356 per 100,000 live births. Community interventions to combat this burden usually focus on community health workers with little emphasis on youth, who have the energy and passion to lead community initiatives. We undertook a community based participatory research using photovoice where researchers and youth engaged in dialogue with the aid of photography to explore how youth can contribute to maternal health in rural communities. This article reflects on the experiences of youth collaborating with researchers through photovoice to examine maternal health in rural communities in Wakiso district, Uganda.

Methods: The project involved 10 youth aged 18 to 29 years old who took photographs for five months. Youths identified photographs that they discussed and jointly analyzed in monthly meetings with researchers, developing an understanding of the emerging issues and engaging in community dialogue on them. The proceedings of the meetings were audio recorded, transcribed, and thematically analyzed by researchers using Atlas ti version 6.0.15. Based on the research findings, young people then worked with investigators to facilitate community dialogues.

Results: Through their participation in the research, youth reported becoming more knowledgeable. They realized they had common experiences but also reflected on and reinterpreted their circumstances. While they acquired self-confidence and enhanced their communication skills, they also initially faced community resistance regarding consent and lack of trust in their motives. Ethical practice in photovoice goes beyond institutional approval and individual consent. It includes extensively discussing the project with community members and building relationships with them. In certain instances, photos needed not to identify community members, or not be taken at all. Through these relationships and with improved capacity, youth engaged in individual instances of health education and advocacy, as well as spurred further local action through community dialogues. Researchers supporting photovoice must be open to learning alongside participants, flexible regarding study focus and processes, sustain interest and manage logistics, all while being reflective about the balance of power in such partnerships.

Conclusion: By using photo voice, young people were able to explore, discuss and reflect on issues within their communities. The resulting discussions among their peers, with those photographed and in
subsequent community dialogues, not only built their own capacity, but also spurred community commitments on a range of local issues.
Isam Eldin Mustafa, National Health Insurance Fund, Sudan
Abstract ID: 2265

The Pattern of Medicines Use in Sudan: A cross sectional study at National Health Insurance Fund setting, in 2012

Co-authors: Isam Eldin Mohammed Ali Mustafa, National Health Insurance Fund

ABSTRACT

Introduction/Background: The irrational use of medicines by prescribers, dispensers and patients has become a common problem worldwide, where more than 50% of all medicines are prescribed, dispensed or sold inappropriately, and half of all patients fail to take medicines correctly. The extent of the problem at Health Insurance setting may be higher due to moral hazards.

Objectives: The objective of this study is to assess the magnitude and nature of irrational use of medicines in National Health Insurance Fund, Sudan and identify the difference in prescribing behaviour in direct and indirect centres by using the Medicines Use Indicators developed by WHO/INRUD.

Methods: The study followed the method developed by the WHO/INRUD. Twenty primary health centres were selected from 5 states that represented the five geographical regions of the Sudan, then 2401 patients encounters were withdrawn from these centres by systematic random sampling. The sampling considered the seasonal variation by taking equal samples from each quarter of the year while age, diagnosis, type of employer and state were adjusted for during the analysis which was performed by using SPSS version 20.

Results: The average number of medicines per encounter was 2.6 with higher value in River Nile State, the percentage of medicines prescribed by generic name was 54.2%, the percentage of encounters with an antibacterial prescribed was 64%, the percentage of encounters with an injection prescribed was 14%, the percentage of medicines prescribed from the NHIF medicines list was 99.3% and the average cost of medicines per encounter was 20.6 SDG. Age was negatively correlated with percentage of antibacterials and positively with other indicators. There were no differences in medical doctor’s behaviour when prescribing for males or females and in direct and indirect health centres. Cardiovascular diseases and Diabetes accounted for the higher number of medicines per encounters and the high cost, while Malaria accounted for high injection prescribing and also relative high antibacterials prescribing.

Conclusion and Recommendations: The study revealed high extent of irrational prescribing especially in excessive use of antibacterials, low use of generic name in prescribing, increased use of injectable antimalarials and polypharmacy in Cardiovascular diseases and DM. The development and implementation of STGs/ EML, especially for UTI, Respiratory Infections, Hypertension and DM, enforcement of generic prescribing guidelines, implementation of antibiotics policy, establishment of
Drugs and Therapeutics Committees in hospitals and educational interventions could be effective in improving the rational use of medicines in Sudan.
Sudha Nagavarapu, Sangtin, India
Abstract ID: 2707

Knocking on many doors' – community-driven efforts to improve the responsiveness of local health systems to Lymphatic Filariasis in Uttar Pradesh, India

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Purpose: Community advocacy for morbidity management of Lymphatic Filariasis (LF) in Sitapur district, Uttar Pradesh, India led to a workshop and camp with multi-sectoral collaboration, followed by long-term monitoring of patients by local volunteers.

Content: As of 2014, 4117 old and new cases of LF had been recorded in Sitapur district by the Health Department. Members of a local farmer-labourer collective conducted their own survey in 6 village 'panchayats' and identified 136 cases with hydrocele, 121 with lymphoedema and 5 with both manifestations of LF, which extrapolates to ~60,000 cases in the district. Discussions with patients revealed years of unsuccessful attempts to access care, disability and huge out-of-pocket expenses. Morbidity management is an essential part of the national programme to Eliminate LF (ELF), but district officials were only aware of the Mass Drug Administration (MDA) component.

The collective identified a resource group in New Delhi who had worked on LF alleviation for decades and was keen on adapting its techniques, used in some government tertiary hospitals, to a resource-starved rural setting. Together, the two groups advocated with the Health Department to respond to community needs. When the latter expressed its inability to provide compression bandages (or allow patients to purchase them in a government organized event), the collective approached the local elected representative for support. These efforts resulted in a pilot programme at Pisawan CHC (Community Health Centre), Sitapur, in November 2015.

62 lymphoedema patients were graded (and 33 provided compression bandages), taught hygiene and self-care practices and administered Benzathene Penicillin injections. A local team, including informal practitioners and staff from a private clinic, received training for follow-up of patients. During the camp and later, 40 men were screened for hydrocele and 15 operated at the District Hospital free of cost. The three follow-up sessions have documented an average of 69.8% reduction of excess limb volume, improved health and increased productivity of patients.

Significance: Awareness about LF, its prevention and management has increased in the community, local health system and among private practitioners. There have been secondary benefits, such as detection of other treatable conditions during screenings and increased engagement with the government health system. However, some system-level issues (provision of penicillin injections, compression bandages) must be addressed with the government and all stakeholders for this intervention to be scaled up. Given the success of the pilot programme, the community is keen to take on this challenge.
Narcisse NAIA EMBEKE, Management Sciences for Health, Congo (Kinshasa)  
Abstract ID: 1717

**Saving Lives and Improving Health in the Democratic Republic of Congo: A Health System Approach to Saving Mothers and Neonates**

Co-authors: Narcisse NAIA EMBEKE, Ousmane FAYE, Juan-Carlos ALEGRE, Management Sciences for Health

Background: The health system of the Democratic Republic of Congo (DRC) faces high costs amid extreme poverty, widely spaced health facilities, limited availability of medicines, logistical challenges of every sort, and often demotivated health service providers. Yet the DRC committed to the call for action of June 2012 that pledges to save an additional 45 million children’s lives by 2035.

To support the DRC and promote the health of its people, the USAID-funded Integrated Health Project (IHP) has scaled up evidence-based technical interventions to save the lives of newborns and mothers, in 78 health zones throughout four provinces in the DRC.

Methodology: IHP uses a seven-step “health system analysis” to select the right approach for the context, figure out how to overcome health systems constraints and barriers, synergize with other services, and bring those life-saving technical interventions to improve effective coverage of maternal and neonatal health services. The systems approach combines a comprehensive epidemiological and health system analysis that informs the selection of feasible implementation approaches. The analysis includes the use of existing modeling tools developed by technical communities to quantify the estimated impact of scaling up the selected technical interventions and health systems interventions for delivering those interventions.

The health system analysis makes use of the Lives Saved Tool (LiST), a modeling tool which allows to prioritize the package of low-cost, high-impact interventions. The package includes active management of third stage of labor, newborn resuscitation, and Kangaroo Mother Care. To improve delivery of these interventions, IHP brings a health system approach to strengthen key components of the Congolese health system including skilled health workforce for maternal and neonatal health services delivered at facility and community levels and the provision of essential commodities and supplies.

Results: After five years of strengthening the Congolese system and implementing a range of low-cost life-saving interventions, IHP Plus has contributed to saving more than 150,000 young children— including more than 11,000 neonates.

Conclusion: The health systems analysis approach focuses support on high-impact interventions for maternal and newborn health feasible in the DRC context. Health systems analysis is applicable anywhere, and will facilitate the selection of technical approaches most likely to work in a particular context to increase effective coverage of life-saving interventions.
Sivaja Nair, Indian Institute of Technology, Madras (IITM), India  
Abstract ID: 2140

Public Health System in the context of emergent vulnerabilities associated with re-emerging infectious diseases: A case of Kerala, India

Co-authors: Sivaja K Nair, Umakant Dash, Indian Institute of Technology, Madras (IITM)

Background: The state of Kerala has been acclaimed for its better health indicators on par with developed countries despite its low per capita income. However, the past decade witnessed the ineptness of state’s public health system in combating new and emerging challenges like re-emerging infectious diseases. In this context, the present study examines the re-emergence of infectious diseases in the state of Kerala in terms of the vulnerabilities it produces, associated financial burden and its consequences.

Methods: A cross-sectional survey of 430 households with a member having one of the selected communicable diseases (Chikungunya, Dengue, Malaria, Leptospirosis), within a recall period of three months had been undertaken to understand the impact of ill health. 55 in-depth interviews with the patients were also conducted to collect information in detail. The households were chosen from various socio-spatial locations involving rural, urban and coastal setting so as to examine the social polarization of these vulnerabilities, if any. The study has employed descriptive, bivariate and multivariate methods in the analysis.

Results: The study result shows that high Out Of Pocket (OOP) expenditure following the sickness pushed households into ‘medical poverty traps’ of varying magnitudes. 62.5% of the households incurred catastrophic health expenditure (through direct cost) associated with single episode of illness, with households from lowest socio-economic quintile (OR= 11.63, p<0.05), which utilized private care (OR= 0.634, p<0.05) and settled in rural areas (OR=2.01, p<0.005) being the most vulnerable.93.65% of the employed respondents lost their workdays following the sickness adding to the opportunity cost of the illness. Only 46% of the households enrolled in the national health insurance scheme could avail cashless services partially in the event of infectious diseases. The catastrophic health expenditure had impoverishing impact. It forced households to cut down food consumption, increase borrowing, discontinue medication and initiate self-medication, thereby deepening the cycles of ill health and poverty that are mutually reinforcing.

Conclusions: The results call for an immediate revamping of the current public health system, specifically its financing mode that places the burden of health care on the households. Policies involving greater degree of risk sharing and protection, particularly targeting categories of the poor have to be designed. The results highlight the need for health system to be responsive to the emerging health challenges with active surveillance and appropriate preventive and protective measures. The results are pertinent in informing the state to make fair choices in its pathway to UHC.
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Abstract ID: 3068

Translating lessons learned from the Ebola outbreak to practice: strengthening trust between communities and health providers for more resilient maternal and newborn health system

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Background: This qualitative study explored the challenges for health providers delivering Maternal and Newborn Health services and explored key behavioural issues affecting women’s health-seeking behaviour during the Ebola outbreak in Sierra Leone.

Methods: In December 2014, we conducted 28 key informant interviews with front-line health providers and 12 focus group discussions with women of reproductive age, men, and female Ebola survivors (n=84) across two districts in Sierra Leone.

Results: This study gave communities and health providers on the front-line an opportunity to share insights about health system performance during the Ebola outbreak. Their accounts revealed that mutual mistrust between health providers and communities was a key issue challenging the system’s ability to sustain provision of MNH care during the outbreak. Health providers lacked competence, confidence and equipment to protect themselves and expressed fear that pregnant women would mask signs of Ebola. Health providers’ fear adversely influenced the quality and availability of care. Communities were discontented that health providers would no longer hold newborns and described instances of health providers neglecting women in labour. Women’s belief that facilities were closed or would turn away pregnant women drove them to home births, perceiving childbirth complications as less risky than Ebola transmission at health facilities. However, community sensitisation by non-governmental and civil society organisations reportedly improved demand for MNH services at the time of data collection, as compared to earlier in the outbreak.

Conclusion: This study showed the importance of re-building trust between health providers and communities in the health system in sustaining demand and supply of MNH services. Support for health providers, including skills-building and provision of protective equipment improved confidence and competence to ensure their safety, whilst promoting an enabling environment for women seeking care. Redressing the balance of power in planning health services requires that health providers at the point of care have their concerns and requests heard by decision-makers. Giving voice to communities and placing them at the centre of the health system, particularly at times of ‘stress’ could help strengthen resilience by increasing legitimacy of the health system. Accountability mechanisms, whereby health providers and women jointly address issues of quality and availability of care, must be strengthened. Finally, the influence of other actors, such as those involved in community sensitisation and women with
recent positive experiences at health facilities, need to be recognised and applied to support capacity to sustain services during times of strain.
JUSTINE NAMAKULA, Makerere University School of Public Health, Uganda, Uganda
Abstract ID: 825

Health worker experiences of and movement between public and private not-for-profit sectors in post conflict Northern Uganda: lessons for health system resilience

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Background: Northern Uganda suffered 20 years of conflict which devastated lives and the health system. Since 2006, there has been investment in reconstruction, which includes efforts to rebuild the health workforce. This article has two objectives: first, to understand health workers’ experiences of working in public and PNFP sectors during and after the conflict in northern Uganda, and secondly, to understand the factors that influenced health workers’ movement between public and PNFP sectors during and after the conflict.

Methods: A life history approach was used with 26 health staff purposively selected from public and PNFP facilities in four districts of northern Uganda. Staff with at least ten years’ experience were selected, which resulted in a sample which was largely female and mid-level. Two-thirds were currently employed in public sector and just over a third in the PNFP sector. Thematic data analysis was guided by the framework analysis approach, analysis framework stages and ATLAS TI software version 7.0.

Results: Analysis reveals that most of the current staff were trained in the PNFP sector, which appears to offer higher quality training experiences. During the conflict period, the PNFP sector also functioned more effectively and was relatively better able to support its staff. However, since the end of the conflict, the public sector has been reconstructed, and is now viewed as offering a better overall package for staff. Most reported movement has been in that direction, and many in the PNFP sector state intention to move to the public sector. While there is sectoral loyalty on both sides and some bonds created through training, the PNFP sector needs to become more competitive to retain staff so as to continue delivering services to deprived communities in northern Uganda.

Conclusions: There has been limited previous longitudinal analysis of how health staff perceive different sectors and why they move between them, particularly in conflict affected contexts. The study adds to our understanding, particularly for mid-level cadres, and highlights the need to ensure balanced health labour market incentives which take into account not only the changing context, but also needs at different points in individuals’ life-cycles and across all core service delivery sectors. Both Public and PNFP sector need to stay strong to ensure their continued contribution to resilient health system in conflict and crisis affected contexts.
Sulakshana Nandi, Public Health Resource Network, India
Abstract ID: 2215

**Monitoring the regulation of clinical establishments: Integrating multi-stakeholder perspectives through a campaign and a study**

Co-authors: Sulakshana Nandi, Deepika Joshi, Rajesh Dubey, Public Health Resource Network

**Purpose:** The issue of regulation of public and private healthcare providers has gained prominence, with India passing the Clinical Establishments Act (CEA) in 2010. With most states still to enact such a law, Chhattisgarh Government passed its own law after consultations with the private sector & civil society. This Act is unique in its provisions for Patient’s Rights and grievance redressal. Since 2014, various health groups associated with the Public Health Resource Network and the People’s Health Movement in Chhattisgarh have collaborated to increase awareness about this Act, and monitor and document its implementation.

**Focus/content:** The campaign includes an ongoing study on implementation of the Act. The study has been undertaken through a process of awareness building and data collection through district and state consultations, interactions with community, civil society, government officials, for-profit and not-for-profit private providers and media. Methods include interviews, group discussions, making observations by visiting health offices and facilities, and collecting secondary data. Findings have been presented periodically to the government and other stakeholders. Civil society groups have been monitoring the implementation of the Act and its provisions, focusing on patient’s rights, regulation of private establishments and grievance redressal.

The for-profit-private practitioners see this Act as interference and harassment from Government while the health administration itself perceives this as lot of extra work and the standards too rigid and difficult to implement. The not-for-profit private sector, mostly operating in remote, rural areas has been facing problems with regards to compliance to standards. Civil society is concerned with the lack of effort by the Government to spread awareness regarding the Act, and the lack of transparency. Attempts to register patient’s complaints have been challenging.

**Significance for the sub-theme area/field-building dimension of relevance and target audience**

The Clinical Establishments Act has provided the health rights groups an opportunity to monitor the private and public health establishments in terms of quality of services, and patient’s rights. However, there is urgent need for the government to enforce principles of participation (of all stakeholders), accountability and ethical practice and build mechanisms for the same. The campaign in Chhattisgarh has been able to bring together all the stakeholders in order to identify issues of concern for further advocacy and action. It has highlighted the challenges and opportunities in civil society engagement with regulation of clinical establishments. Learnings from the campaign can be used for similar action elsewhere.
Corporal violence or liberated bodies: Reimagining body after hysterectomy

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Background: Evidence indicates that only about 10% of hysterectomies are performed for abnormal cervical cytology and cancers; the rest is done for non-life threatening and benign conditions. A key finding from one of our earlier studies was that a number of women had undergone hysterectomy at a very early age. Prompted by these findings, we undertook this qualitative study of women who had undergone early hysterectomy with the aim of exploring its impact on their social life, their perceptions of their body after hysterectomy, and the way they cope with the newly acquired ‘status’. Our initial assumption was that these women will be strongly affected by this bodily loss, possibly they construe it as a violation of their body and self, and it might have serious personal and social implications.

Methods: In-depth interviews were conducted with 13 women who had undergone hysterectomy before the age of 35 years. They were selected purposively with representation along the dimensions of the residence (rural/urban), education, caste and religion.

Results: While most women were convinced that hysterectomy was a medical necessity, this medical justification was manufactured by the professionals invoking a fear of future life threatening conditions, and assuring that “it will solve all problems in one shot permanently”. Frequently the expenditure involved was covered under the recently introduced free social health insurance scheme.

From the point view of the women, contrary to our assumptions, the findings questioned typical ideas of ‘self-preservation’ and revealed hysterectomy as a new strategy conjured by them to handle sexual violence within the family in a patriarchal society. In many senses, undergoing hysterectomy was perceived as a sort of freedom that is gained: freedom from menstruation, from the nagging pain that recurs every month, from contraceptives, from the fear of repeated pregnancies, potential abortions and miscarriages. The removal of the uterus, also symbolically conveyed that these women were out of the constant patriarchal surveillance stemming from norms around purity and pollution associated with a female body and sexuality.

Conclusion: The findings of this formative study throw up a number of questions for further exploration: role of the medical profession in manufacturing consent for procedures in unwarranted conditions, the role played by social health insurance in such situations, the potential social and public health concerns in women reimagining a corporal violence as a means to liberated bodies while being under the clutches of a virulent patriarchy and profiteering medical practice.
Peter Nantamu, Jinja District Local Government, Uganda
Abstract ID: 1660

MONITORING AND EVALUATION PROCESSES AND PUBLIC HEALTH SECTOR PERFORMANCE: ASURVEY OF JINJA DISTRICT, UGANDA

Co-authors: Peter Dyogo Nantamu, Edgar Mwesigye Kateshumbwa, Christopher Mayanja, Jinja District Local Government; Uganda Management Institute

In 1999/2000, the Uganda ministry of health launched the National Health policy and National strategic plan with two major reforms of decentralisation of health service delivery and the Sector Wide Approach. The district health team is mandated to implement the essential health leadership and management functions in the district. The district health managers are mandated to monitor and evaluate health service delivery in the district and Health sub district managers perform leadership and management functions at Health centre four and lower level health facilities.

We investigated the effect of monitoring and evaluation processes on public health sector performance in Jinja district. Specifically the study examined the effect of how managers conducted monitoring and evaluation processes and data demand and use on public health sector.

The study adopted a cross sectional survey design to obtain a sample of 201 respondents, 27 health facilities. Data was collected using interview guides, questionnaires and document review checklist. Data analysis used thematic methods, Pearson’s correlation analysis and regression equation to predict relationships.

The findings revealed a statistically significant positive association between monitoring and evaluation processes, and health sector performance. The study demonstrated that monitoring and evaluation processes implemented according to the recommended standards, data demand and use by health managers at the various levels of the health system positively improve health sector performance.

The conclusion from the study was that health facility managers at the various levels in the district were not conducting monitoring and evaluation of health service delivery according to the Uganda ministry of health set standards and this is partly contributing to the under performance of the public health sector.

To improve public health sector performance, the study recommended that district health managers pay much attention to ensuring that health facility managers are trained and supported to conduct monitoring and evaluation processes according to recommended Ministry of Health guidelines. Finally the district managers and the health implementing partners need to support the strengthening of the health system capacity to use data for decision making.
Agnes Nanyonjo, African Population and Health Research Center, Kenya
Abstract ID: 405

Are district health teams ready to implement sustainable integrated community case management? Evidence from a qualitative follow-up health system analysis in Uganda

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Background: The integrated community case management of childhood illnesses (iCCM) by community health workers (CHWs) is a recommended strategy for health service delivery in areas where access to health facilities is limited. Even though the implementation of iCCM does not occur in isolation from the existing health system structures, few studies have applied a health systems perspective to the evaluation of iCCM implementation. This study used the health systems framework to assess iCCM implementation progress at the district level.

Methods: The study draws on the health systems framework for both data collection and analysis. Data were derived from semi-structured interviews with various members of the district health team (DHTs) from eight districts in mid-western and central Uganda. DHTs are made up of district health officials who are responsible for strategic planning and management of health in the district. Pre-implementation (April 2010), DHTs were asked about their strategies and readiness to implement iCCM. Post-implementation, DHTs were asked about the implementation of various components of iCCM, the most significant health system changes observed and plans for future iCCM implementation.

Results: Pre-iCCM implementation, DHTs were enthusiastic about iCCM implementation and mentioned district specific implementation plans. These included advocating for inclusion of an iCCM budget in the district work plan in order to avoid donor dependence, partnering with donors in CHWs training in order to increase qualified workforce, improved CHW supervision and motivation, improved reporting of community level data, and supply of necessary drugs and commodities. Five years later, while CHW coverage by village had reportedly improved greatly in all districts, iCCM financing remained largely donor dependent. CHW supervision was still poor and no district specific CHW motivation strategies were implemented. Reporting of community level data remained poor and iCCM drugs were not integrated into the district drug procurement chain except for one district which attributed its success to a good accountability system. For a long time, the iCCM reporting and drug procurement guidelines were not integrated into the national health information system and drug supply chain impeding iCCM implementation at the district level.

Conclusion: Efficient implementation and sustainability of the benefits of iCCM at the district level requires high commitment at both the national and district levels. Early integration of national iCCM policies into district health management systems is of dire necessity.
Sudirman Nasir Nasir, Eijkman Institute, Indonesia  
Abstract ID: 1622  

Impact of Health Promotion Trainings of Community Health Providers on Community Maternal Health Services in Cianjur, Indonesia  

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Background: The community integrated primary health programme in Indonesia emphasizes health prevention and promotion, delivered by village midwives and community health volunteers (kaders). In our context analysis of the issues around maternal health service quality, we identified that community health workers had poor knowledge and communication skills in counseling pregnant women on maternal health issues. Poor practice among frontline health staff was a barrier to health system improvement and high quality provision of care.  

Methods: To address these issues, we conducted health promotion trainings for community health providers in four villages in Cianjarg subdistrict, Cianjur district, West Java, focused on how to promote health facility delivery. Small group trainings were held using a participatory approach to increase providers’ knowledge of the danger signs of pregnancy and delivery and to improve birth preparedness. They were also taught to use pictorial job aids specially developed for the Cianjur context and hold negotiations and communications with pregnant women about the benefits of health facility delivery. The effectiveness of the trainings was assessed before and after the training through semi structured interviews (87 SSIs) and focus group discussions (6 FGDs) conducted with the health workers and pregnant women attending the Posyandu (integrated community health post). Additionally, post-training observations with checklists were held one month apart at three time points.  

Findings: During 14 workshops, 188/233 (80.6%) kaders and seven village midwives (100%) were trained. We found that most health workers developed better understanding of maternal health issues and with their new knowledge they were enthusiastic to answer questions asked by pregnant women. Most community health providers used the pictorial health counseling card in post-training consultations and actively brought up crucial issues such as birth preparedness. Most community members interviewed acknowledged that the quality and frequency of health promotion conducted in the Posyandu improved. The new knowledge and skills as well as community recognition increased the motivation of the community health providers in conducting health promotion.  

Conclusion: The health promotion trainings contributed to increase the knowledge about maternal health issues and improve interactive communication skills of the community health providers. As a result the perceived quality of services they provide improved and benefitted the pregnant women. The participatory approach employed in the trainings is an important factor in boosting the knowledge, skills and motivation of health workers in providing health promotion.
Access and coverage don’t tell the whole story: incorporating quality of care indicators in the Mozambican National Health Information Systems (HIS)

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Background: Mozambique is expanding access to and coverage of Reproductive, Maternal, Neonatal, and Child Health (RMNCH) services. Nevertheless, there is a concern that better access and coverage by themselves may not translate into better health outcomes. To obtain more extensive and consistent information on this element of care, the Ministry of Health of Mozambique (MOH) decided to modify its HIS to include data on selected quality of care practices.

Methods: In 2011, the MOH with support from the USAID/Maternal and Child Health Integrated Program-MCHIP, UNICEF, WHO and other partners, revised the RMNCH component of the national HIS to include quality and respectful care data. Working groups reviewed the information tools for 7 RMNCH areas: (1) Ante-Natal Care (ANC); (2) Child at Risk (CR); (3) Maternity Admission; (4) Maternity-Delivery Ward; (5) Post-Partum/Post-Natal Care (PP/PNC); (6) Reproductive Health; and (7) Gynecological Emergencies. Decisions were made on clients’ individual information that should be in the registers, main indicators, and information to be reported monthly for the indicators. To avoid data duplication and to have information on “completion of care”, three areas had data reported on cohorts: ANC (first visits and 6 months cohort), PP/PNC (first visits and 3 months cohort), and CR care (first visits and 9 and 18 months cohort).

The system also includes data on direct and indirect obstetric complications and maternal deaths to determine the institutional maternal mortality ratio, fresh stillbirths, and neonatal deaths.

A field test of the revised tools was conducted to assess acceptability, evaluate gaps and consistency of the data collected, and test the cohort approach. A training cascade as well as a monitoring and supervision process were implemented for the roll-out of the upgraded system.

Results: Information provided by the system since 2011, including routine reporting of active management of the third stage of labor, use of magnesium sulphate for pre-eclampsia, and respectful care practices, has already been used to document results of the large MCHIP program in the country, linking quality practices with improved mortality outcomes. By the first quarter of 2016, all health facilities will start reporting information and indicators based on the revised tools and system.

Conclusions: The Mozambique experience shows that routine HIS can be enhanced and strengthened to provide data for RMNCH program monitoring that includes not only coverage but also quality of care. This information can be very valuable for documenting results, relating practices and outcomes of RMNCH interventions.
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Abstract ID: 607

**Building infrastructure for HIV services and Universal Health Coverage: an inter-sectoral approach for a national and sustainable human resources (HRH) information system in Mozambique**

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**Background:** As the world aspires to an AIDS-free generation and universal health coverage, Mozambique still ranks 10th from bottom on the WHO 2010 list of countries with greatest health workforce deficits globally. Addressing HRH constraints is challenging due to the lack of available and updated data on the health workforce. To address this issue, in 2010 the MoH, with PEPFAR/CDC and Jhpiego support, initiated the development of a national HRIS to improve planning and management of HRH.

**Methods:** The Ministry of Health (MoH) and Jhpiego organized a team to conduct an assessment of needs for improving the human resources for health (HRH) information systems. The assessment focused on finding: information needs for HRH planning and management, existing data and electronic data infrastructure, and institutional capacity for maintenance of complex electronic databases.

**Results:** The team found that the HRH information systems were fragmented and outdated and that the Government of Mozambique (GoM), through the Ministry of Finances (MoF) was creating a web-based multi-sectoral information infrastructure for finances (SISTAFE) and payroll (eCAF). The eCAF database was web-based and comprehensive but included only generic information for payroll purposes and not information the MoH needed for planning and management, such as location of workers to the health facility level and professional categories. The MoH and MoF agreed on improvements to the SISTAFE/eCAF system, implemented and maintained by the MoF technical unit at no cost to the MoH. The MoH also linked independently developed pre-service and in-service information systems to the extended eCAF, building an integrated MOH HRIS.

The extended eCAF is in operation nationwide. Data is updated monthly by MoH staff using the MoF intranet at no cost to the MoH. Data is continuously available to the MoH and managed through a business intelligence tool to produce updated dash-boards and reports which are publicly available in the MoH website. More than 95% of MoH workers are included in the database and nearly 80% have allocation to the facility level. The HRIS is now the main source of information for MoH reports.

**Conclusions:** The MoH and GoM have full ownership of the HRIS and show it as an example of inter-sectoral collaboration and national systems strengthening. This experience shows the importance of having an inter-sectoral approach when developing sustainable systems. Some additional advantages were: lower development costs, better prospect of coverage and updating of the information, and national institutional support, including connectivity and system maintenance.
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Abstract ID: 1411

Suffering Quietly: Unacknowledged Sexual Harassment as a Health System Corruption That Undermines Health System Responsiveness and Performance

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Background: Sexual harassment prevention and response is key to good health systems governance and human resources management. Health systems that take no action face health worker attrition, reduced job satisfaction and productivity, increased interpersonal conflict, and absenteeism. In Uganda, a 2012 Ministry of Health (MOH) assessment found that 32% of public health sector employees reported supervisor expectations of sexual favors in exchange for a promotion, a salary raise, or a good evaluation was a common, though unspoken, problem. Key informants confirmed that the abuse of power in quid pro quo sexual harassment was a rampant and serious form of corruption. While sexual harassment has been defined in Ugandan law and policy, the extent of policy implementation in the public health sector is unknown.

Methods: The Uganda MOH is implementing a follow-up formative assessment intended to result in a system to prevent sexual harassment, end impunity, and promote equal opportunity and gender equality. Employee surveys, key informant interviews, focus group discussions, and document review will identify the organizational dynamics of sexual harassment and reporting patterns; consistency of definitions in existing policy; grievance procedures in place; challenges and opportunities related to implementing a sexual harassment prevention and response system; and baseline data on measures of system success such as a code of conduct available in workplaces, managers trained to resolve sexual harassment cases, or claims investigated and successfully closed.

Results: Data analysis, to be completed by the end of June, will explore gender inequalities in organizational status; male/female differences in defining sexual harassment, its causes, harms and impacts; sources of opposition to introducing and enforcing a prevention and response system; and interventions that are likely to change organizational culture to improve health system performance.

Conclusions: The MOH will use the assessment results to arrive at common understandings of sexual harassment and what will work to prevent it and counter its harms to protect health workers’ safety, security, and labor rights. Knowledge translation activities are built into the research process from the outset and continue through the research/dissemination/application process to ensure ownership and use of results. The MOH will hold multi-stakeholder dissemination exercises to vet results, envision a desired future, and identify the design elements of a pilot sexual harassment prevention and response system where knowledge is translated into organizational change mechanisms such as sexual
harassment policy, reporting/investigation procedures, supervisor and employee education, and communications.
Juhwan Oh, Seoul National University, Korea, South
Abstract ID: 2538

Participation of the Lay Public in Decision-Making for Benefit Coverage of National Health Insurance in South Korea

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Although South Korea successfully established national health insurance (NHI) in 1977, and has maintained universal coverage since 1989, it has long been criticized for insufficient benefit coverage. Korea has been under public pressure to increase its NHI benefit coverage, while also facing controversies over the appropriateness of items that were newly added to the benefit package. Pressured by the controversies and difficulties regarding national policy decisions on the benefits package, the Korea National Health Insurance Services eventually decided to establish a lay citizen’s council, named the Citizen Committee for Participation, to help incorporate social value judgments in benefit coverage priority setting in 2012. The experience of the citizen council in Korea shows that unlike common myth, people may be willing to increase their premium contribution to expand benefits once a deliberative, democratic decision-making process exists. The general public does not necessarily demand ever-increasing benefits; rather they wish to keep benefits at a reasonable level once they understand the nature of public funding, financial sustainability, and cost effectiveness. If these experiences are common among all people in the world, not only in the unique context of Korea, this public participation approach to deliberative democracy may help reduce policy failure in other cultural settings.
The Leadership Trinity: A Framework for Leadership Development in the Health Sector

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There is growing recognition that effective leadership is critical in a resilient and responsive health system. However, the nature of the leadership required, the factors that influence it, and the implications for health leadership development more generally are not so far well understood. Indeed, while competency frameworks and other approaches have been used to underpin leadership development in healthcare organisations, they alone are not sufficient in developing effective leadership. Acknowledging healthcare organisations, such as hospitals, as complex social systems, this paper presents a conceptual framework for understanding healthcare leadership as a situated practice, exercised in and influenced by a given organisational context– including multiple sets of relationships among those working in that context.

The Leadership Trinity framework presented in this paper is derived from broader and health sector specific empirical and conceptual literature on organisational analysis, organisational development, organisational behaviour, organisational sociology, public administration, leadership, and leadership development. They were accessed from different but relevant databases including: ABI-Inform, Social Sciences Citation Index, Journal of Health and Organisational Management, Leadership Quarterly, Administrative Science Quarterly, Academy of Management Journal, and EBSCOhost.

The framework describes the elements of healthcare organisations that are important in the development of effective leadership for resilient and responsive health systems. It is useful in explaining the possible linkages between healthcare organisational context, leadership development, and leadership effectiveness/ineffectiveness. Job satisfaction and motivation are attributes that measure effectiveness/ineffectiveness and can be summed as work engagement. Relationships and interactions between managers, workers and colleagues within healthcare organisations as social systems contribute to the emergence of effective leaders. Leadership development is likely to be influenced by internal factors that include demographics, structure, and culture within healthcare organisations which, in turn, affect how effective or ineffective leadership is displayed. External organisational factors such as policy regulations, political or economic context, and historical events also play a critical role in the growth of effective healthcare leaders.

The framework is of value to policymakers seeking to strengthen leadership in their settings, because it allows for practical approaches to the development of effective leadership. It will also be of value to researchers because it can be used for holistic analysis of hospitals as healthcare organisations, and understanding the role of hospital context in effective healthcare leadership. It is, therefore, significant because it addresses a relatively under-researched area in health systems work, draws on wider relevant literature and has use-value to key target audiences of the Symposium.
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Abstract ID: 1221

**Singapore’s Regional Health Systems (RHS): Challenges, Opportunities, and Ways Forward for Policy Implementation**

Co-authors: Suan Ee Ong, Shilpa Tyagi, Jane Mingjie Lim, Helena Legido-Quigley, Kee Seng Chia, Saw Swee Hock School of Public Health, National University of Singapore; Saw Swee Hock School of Public Health, National University of Singapore, and London School of Hygiene and Tropical Medicine

Singapore’s health system is in transition, facing a rapidly ageing population, a growing burden of chronic disease, and a health system structured to respond best to episodic care. In response to these challenges, Singapore has implemented the Regional Health Systems (RHS), which aims to seamlessly coordinate health services in order to care holistically for the population within a community setting and across the health spectrum. This qualitative study sought to identify the health systems-level barriers and facilitators to implementation of the RHS and possible ways forward.

A qualitative study of 34 semi-structured key informant interviews with stakeholders throughout Singapore’s health system, including representatives from all RHSs, and the private and voluntary welfare sectors. Interviewees came from primary, secondary, tertiary, intermediate, and long-term care; policymaking; healthcare management; clinical practice; and academia. Interview data was thematically analysed, and emergent themes were identified.

Interviewees identified several key facilitators to RHS implementation. They included enlightened leadership at government and organisational levels, openness to novel ideas and innovation in healthcare, willingness to adapt to changing population health needs, and shared recognition that integration of care across the continuum is the way forward for the RHS. Interviewees also identified barriers to RHS implementation. They recognised that RHSs were introduced to address the nation’s most urgent health challenges, but some questioned the need for 6 RHSs in a small city-state like Singapore and voiced concerns around fragmentation. Interviewees suggested that more was needed to integrate primary care with secondary and tertiary care, health with social care, health from the patient’s point of view, and health at a systems level. Other barriers to RHS implementation cited were differing philosophies of actors and institutions within the health system, tensions between cooperation and competition between RHSs, and the scalability and sustainability of RHS pilot programmes. In suggesting ways forward, many interviewees mentioned a need to shift towards a more patient/people-centric approach to health. Suggestions included thinking about the value of care to the patient, using multidisciplinary teams to provide care, how to streamline and optimise care processes, and measuring outcomes that are important to patients, not just the health professional or institution.

This study highlights enlightened leadership, openness to change, and shared understanding of way forward as key factors that enable Singapore’s health systems reform process. However, there remain
significant issues that require consideration in order to ensure the smooth transition of the health system into a fully-fledged RHS framework.
Pierre Ongolo-Zogo, CDBPH Central Hospital University Yaoundé 1, Cameroon

Abstract ID: 2474

An Observatory of Medicines against CNCDs: Effects on Pharmaceutical Governance and Medicines Availability, Accessibility and Usage

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Background: In sub Saharan health systems, patients suffering from CNCDs mostly cope with the mixed health systems in which the private sub sector dictates its market rule. Hypothesizing that an Observatory of Medicines against CNCDs tailored to disseminate reliable information to targeted stakeholders would enhance access to medicines, we will complete in June 2016 a three-year grant from the Alliance for Health Policy and Systems Research. Following on the report during the Symposium in Capetown on the design process of the Observatory and its monitoring and evaluation framework, our objective is to report on its process evaluation, its effects on stakeholders’s knowledge, attitudes and perspectives on medicines accessibility, availability and appropriate usage and its perceived influence on pharmaceutical governance.

Methods: Designing the Observatory was informed by a multiple methods situational analysis including a scoping document review, a knowledge attitudes practices and preferences survey of prescribers, dispensers and patients suffering from hypertension, diabetes, breast cancer and prostate cancer, in-depth interviews with decision makers nationwide in Cameroon and, a focus group discussion with journalists. Five country-wide evidence-informed stakeholders’ dialogues validated its infrastructure, activities and outputs and expected monitoring and evaluation framework. The Observatory operates since November 2014 as an online database providing information on CNCDs, repertoires of stakeholders, scientific papers, evidence summaries and medicines price and availability. Messages are sent through an email-list of stakeholders and radio magazines are broadcasted for the general public. Evidence-informed stakeholders’ dialogues were organized on sustaining and scaling up the Observatory and improving access to anticancer chemotherapies.

Results: We will exhibit the lessons learned from the process evaluation in terms of activities, workload, and design of the online database, user’s satisfaction, and reach and staff reflexivity. We will equally report on the changes observed in stakeholders’ knowledge, attitudes, views and perspectives on the accessibility, availability and usage of medicines against CNCDs and pharmaceutical information systems. The perceived influence of the Observatory on health governance and pharmaceutical governance especially will be discussed.

Discussion: Reinforcing the pharmaceutical information systems to enhance stakeholders’ access to tailored information has eventually enhanced health governance and pharmaceutical governance particularly within Cameroon mixed health system in which medicines market mostly operates under private rules. The patient-centered pharmaceutical information has enhanced knowledge and attitudes towards appropriate usage of medicines. Lessons learned from this pilot people-centered intervention using a systemic perspective can inform future research on pharmaceutical information systems in similar contexts.
What actions help (or hinder) the adoption of early-stage health system strengthening reforms in South Africa

Co-authors: Marsha Orgill, Lucy Gilson, Janet Mitchel, Wezile Chita, Ermin Erasmus, Bronwyn Harris, University of Cape Town; University of Cape Town and London School of Hygiene and Tropical Medicine; The Africa Centre; Walter Sisulu University; The University of the Witwatersrand

Background: South Africa is implementing multiple health system innovations in primary health care (PHC) toward the goal of Universal Health Coverage. This research sought to understand how contextual factors and actions taken by national government enable or constrain early-stage reform adoption by district managers. Innovation theory supports exploration of how ideas embedded in the new reforms are diffused and disseminated as a key element/first step in the adoption of reforms. Highlighting the important role of context, boundary spanners and networks in spreading new ideas, innovation theory resonates with the understanding that health systems are complex systems in which large scale transformation is never a linear, straightforward process.

Methods: Three health districts were selected as case studies and four PHC innovations, as tracers. A theory of change approach was used as a pragmatic tool for data collection and analysis, allowing managers’ voices to be heard. Drawing from a larger study, for this paper we used the thematic analysis approach to analyze 35 in-depth interviews with senior managers across three districts, undertaken early in reform; and analyzed supporting documents.

Results: Districts are not a blank canvas: historical, institutional challenges such as poorly functioning support services and tensions with provincial governments influenced reform adoption. New innovations competed with existing services for resources and caused anxiety for senior managers who had to get staff buy-in to implement them. However, managers’ valued district visits from the Minister of Health that sought to promote a shared vision for change, and scheduled, coordinated visits from provincial and national support teams. These teams were however sometimes quite rigid in their engagements, not recognising existing district level activities and priorities. Districts have a wealth of existing ideas and platforms that can be leveraged to maximise and improve new reforms. District level reform coordinators were seen as effective boundary spanners.

Discussion: The 2016 White Paper on National Health Insurance will bring further system reforms in South Africa in the coming years. Districts and sub-districts have different capacity levels to adopt and implement these reforms. In some districts, the ‘basic’ capacities of a well-functioning district, such as human resources and financial support systems, must still be developed. Nationwide, centrally-driven processes of reform must be accompanied by efforts to disseminate reform visions and underlying assumptions so that managers can engage with reform value. National ‘support’ for reforms should be flexible and respectful of the districts’ existing routines and challenges.
Rose Oronje, African Institute for Development policy, Malawi
Abstract ID: 3381

Lessons from the rapid assessment of the performance of the National Health Research Agenda

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Background: Malawi’s first National Health Research Agenda (NHRA) serves as the country’s template for health research and development efforts being nationally set and agreed priorities for Malawi for 2012 to 2016. Such prioritisation is imperative in obtaining research evidence which is needed to direct policy, practice and decision making in the health sector.

The assessment aimed at evaluating the effectiveness of the NHRA in meeting its set objectives.

Methodology: This was a cross sectional descriptive study aimed at collecting both quantitative and qualitative data. Purposive and snow sampling sampling techniques were used to select people to be interviewed. The study interviewed personnel who participated in the development, implementation and utilisation of the NHRA. These included decision makers from Ministry of Health, researchers, some Non-Governmental Organizations (NGOs), Civil Society Organizations (CSOs) and Development Partners.

Results and Discussion: The study has shown that overall, the research agenda has achieved some, and not all, of its goals and objective despite 30 out of 32 interviewed stakeholders reporting of their awareness of the goals and objectives of the research agenda. The weighted average on the achievement of the goals and objectives is 2.92. On the other hand, the NHRA has performed well in regards to giving direction for health research within the priority areas, with a weighted average score of 3.45. However, there is need for more awareness of the NHRA and need to incorporate wider stakeholders in its dissemination, implementation and monitoring.

In the context of enhancing local capacity in conducting research, even though a good number of stakeholders affirmed that there has been an increase of the number of local PI’s overtime, however, whether this increase can be attributed to the NHRA or not, remains unclear.

Regarding the extent to which the NHRA has promoted the utilization of research evidence in decision making processes, the study established that its impact on utilization of research evidence has been minimal.

The study also established that the NHRA has not clearly and effectively facilitated the coordination of health research due to lack of an implementation plan for the research agenda.

On the overall, the study established that health research in Malawi lacks funding and proper mechanisms of ensuring that researchers are indeed conducting studies that are stipulated as priorities in the NHRA. The findings of the study have informed the revision of the NHRA.
Rose Oronje, African Institute for Development Policy (AFIDEP), Kenya
Abstract ID: 890

Why are poor countries’ efforts to overcome barriers to research use bearing little results? The case of Kenya and Malawi

Co-authors: Rose N. Oronje, Violet I. Murunga, Abiba Longwe-Ngwira, Nissily Mushani, Eliya M. Zulu, Jones Abisi, African Institute for Development Policy (AFIDEP)

Background: Given the importance of research in strengthening health systems, low and middle-income countries (LMIC) are implementing various efforts to increase research use. However, in Kenya and Malawi, this study finds that these efforts are bearing little results.

Methods: Literature/document review, key informant interviews, and reflections from two-years of implementing capacity-building interventions for increased research use in Kenya and Malawi.

Results: Kenya and Malawi have instituted various efforts to increase research use. In Kenya, the 2010 constitution stipulated allocation of 2% of GDP to research, but five years later this has not been operationalised. In 2013, Ministry of Health (MoH) established a health research division, but this is understaffed (3-staff) and underfunded, and staff lack knowledge translation (KT) skills. The Kenya Medical Research Institute (KEMRI) is MoH’s research arm, but the two institutions have no mechanisms for regular exchange/discussion of information/research. Also, MoH has neither a research agenda nor institutional guidelines that guide and require evidence use.

In Malawi, MoH has a research unit but this is understaffed (2-staff) and underfunded, so contributes little to KT. MoH has a knowledge translation platform (KTP) since 2012, but this has no funding and contributes little to KT. MoH adopted a health research agenda in 2012, but a 2015-assessment revealed that this is contributing little to increasing research use because of limited implementation. The Malawi Public Health Institute was established in 2013 partly to increase research use, but it has not been operationalised.

In both countries, MoH lacks a functional library, reliable Internet, and subscriptions to free online-databases (e.g. HINARI), yet these can greatly increase access to research.

Our 2014-capacity assessment found that most MoH staff in Kenya and Malawi lack skills in finding, appraising, interpreting, and applying research. In 2015, we tested an innovative training programme on research use in two countries that has demonstrated potential in increasing research use. But, for this training to produce meaningful impact, it has to be scaled-up into curricula of training institutions.

Conclusion: For these efforts to meaningfully increase research use, the two countries should: Increase funding for research generation and translation Institutionalise mechanisms/platforms for regular exchange/discussion of information/research Define clear roles of MoH-based research units, adequately resource units to support KT Address glaring access barriers, i.e. establish functional
libraries, reliable Internet, subscribe to free online-databases

Define and operationalise/implement research agenda, guidelines for research use, and KTPs

Incorporate proven research-use training programmes in training institutions
Patricia Ortiz, Pontificia Universidad Católica del Ecuador, Ecuador  

Abstract ID: 1504

Brechas en el proceso de atención y control de la hipertensión en el área urbana de Conocoto, Quito- Ecuador.

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Es globalmente reconocida la importancia de la hipertensión arterial crónica (HAC) como problema de salud pública. La HAC es la enfermedad con mayor mortalidad atribuible a nivel mundial, asociada al 62% de los accidentes cerebrovasculares y el 49% de las cardiopatías isquémicas. Sin embargo, la evidencia epidemiológica actual muestra bajas coberturas en el diagnóstico, tratamiento y control de la hipertensión en casi todos los países.

Con el fin de explorar las brechas en el diagnóstico, atención y control de la HAC en el Ecuador, se realizó un estudio transversal de base poblacional en la Parroquia de Conocoto, en Quito. Realizamos encuestas mediante entrevista directa y toma de la presión arterial a una muestra aleatoria de 2100 personas con edades entre 35 y 75 años. Definimos como HAC controlada cifras menores a 140/90 mm Hg para personas entre 30 y 59 años; y menores a 150/90 mm Hg para personas con 60 años o más.

El 52,8% de la población encuestada tiene algún tipo de seguro de salud y el 47,2% no tiene seguro, por lo que su atención la realiza el Ministerio de Salud Pública (MSP). La prevalencia no ponderada de hipertensión fue del 12,5% [IC 95 11,1% - 13,9%]. La brecha de diagnóstico fue de 1,4% [IC95 0,87% – 1,9%]. La brecha de seguimiento fue de 15,5% [IC95 10,9% – 20,5%], siendo mayor en quienes acuden a las unidades del MSP que en aquellos con seguro de salud (18,7% [IC95 10,8% – 26,5%] vs 13,4% [IC95 7,2% – 19,5%]). La brecha de tratamiento farmacológico fue de 17% [IC95 12% -21,9%]. Se encontró HAC no controlada en el 12% [IC95 5,4% – 18,8%] de los hipertensos que acuden al MSP y en el 6% [IC95 1,5% – 10,3%] de los que cuentan con algún seguro de salud.

Las brechas en la atención y control de la hipertensión encontradas en nuestro estudio son bajas en comparación a las reportadas local e internacionalmente. Los resultados están influenciados por las características socio-demográficas particulares de Conocoto pero probablemente también están reflejando mejoramientos realizados en los últimos años por el Sistema de Salud Ecuatoriano. La bajísimas brecha de diagnóstico sugiere un enorme progreso en el acceso a servicios de salud y medicamentos. Sin embargo, los resultados también sugieren que la prevalencia de hipertensión viene en aumento en el Ecuador y que aún persisten problemas en la calidad y continuidad de la atención.
Samiratou Ouedraogo, University of Montreal, Canada, Canada
Abstract ID: 2681

Social vulnerabilities: what can we learn from the community-based selection approach to target indigents for free health care in Burkina Faso?

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Background: The objective of this study is to contribute to a better understanding of the social vulnerabilities leading a person to become an indigent, as defined by its own community.

Methods: We used data from a survey conducted as part of the evaluation of a pilot project for a performance based financing of the health service in two districts of Burkina Faso, a West African country. A total of 2077 non-indigents and 1009 indigents selected by the community members were interviewed between February and April 2015. Demographic and socio-economic characteristics as well as health status and physical functioning were collected. Using the Quick Unbiased Efficient Statistical Tree method, we built a model which allowed selecting characteristics that were more likely to split the non-indigents and indigents. A tree was generated to maximum size, where each node contains single-class data or no test offers any improvement on the mix of classes at that node, and then pruned to avoid over-fitting. We also described the diagnostic performance of the tree using data from specific nodes.

Results: Using colour codes the tree nodes were categorised according to the proportion of indigents: red (nodes 3, 9 and 15 with proportions of indigents higher than 75%), orange (nodes 1, 5, 8, 11, 18, 19 with proportions of indigents between 50% and 75%), yellow (with proportions of indigents between 25% and 50%) and beige for those nodes with proportions of indigents less than 25%. The red and orange nodes could be used as screening tests with high specificity. Since the first partitioning variable, age 45 years and over was so strongly associated with indigence, we developed separate screening schemes for those aged 45 years and more and for those younger than 45. Using simple rules based only on easy to obtain indicators of marital status and sex, we were able to detect about 75.6% of indigents among people aged 45 years and more with a specificity of 55% and 85.5% of indigents among people younger than 45, with a specificity of 92.2%. Combining both tests to give summary measures, we obtained a sensitivity of 78% and a specificity of 81%.

Conclusions: The results of our study showed that indigence was associated with older age unmarried status and female gender. These demographic factors were so strongly associated to indigence that they were hiding the effect of socio-economic characteristics health status and physical functioning.
Sarita Panday, The University of Sheffield, United Kingdom

Abstract ID: 1891

Female Community Health Volunteers providing maternal health services in Nepal: health system support and barriers.

Co-authors: Sarita Panday, Paul Bissell, Padam Simkhada, Edwin van Teijlingen, The University of Sheffield; Liverpool John Moores University; Bournemouth University

Background: Community health workers known as Female Community Health Volunteers (FCHVs) provide basic Maternal Health Services (MHSs) to pregnant women and mothers in their communities. Their contribution to maternal health improvement has been widely praised as Nepal managed to reduce maternal mortality by more than two-thirds between 1990 and 2010 and achieved the Millennium Development Goal 5. This paper addresses health system factors that promote or hinder the delivery of MHSs by FCHVs in two different parts of Nepal, from the perspectives of health workers, service users, and FCHVs themselves.

Methods: A qualitative approach was adopted using semi-structured interviews, focus group discussions (FGDs) and field notes. Interviews were conducted with 20 FCHVs, 11 health workers and 26 women in villages in the hills and in lowlands in the south (Terai). In addition, four FGDs were conducted with 19 FCHVs. Data were analysed using thematic analysis.

Findings: FCHVs were highly motivated to serve pregnant women and mothers in the remote hill villages. Apart from basic MHS provision such as referring women for health checks, they used novel strategies to share key maternal health messages. They sang folk songs composed of health messages in local celebrations and visited new mothers with food hampers. They also distributed medicines to treat simple illnesses. This was possible because FCHVs were well supported by both government health system and non-governmental organizations in terms of their training, supervision, financial incentives and access to medical supplies. However, such support was rarely available to FCHVs in the lowlands. This not only hindered their provision of MHSs, but also undermined the community's trust of FCHVs and reduced their enthusiasm at work. Furthermore, the domineering attitudes of some health workers towards FCHVs, and a lack of coordination between government health system and NGOs mobilizing FCHVs hindered their MHS provision.

Conclusions: FCHVs were largely seen as a valuable resource for improving the maternal health of the poorer women in the remote hill communities. However, for FCHVs to be properly valued, their contribution to MHSs needs to be recognized and respected by both health workers and the communities. FCHVs need context specific support including incentives, access to supplies and supportive supervision, to enable them to deliver services more productively. Coordination between the government health system and NGOs is also necessary to reduce the work burden to FCHVs and to ensure that their services flourish in the future.
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Abstract ID: 3240

**Building national capacity for health system research: Role of KEYSTONE initiative**

Co-authors: Udayan PANDYA, Joe Varghese, Surekha Garimella, Kabir Sheikh, Health Governance Hub, Public Health Foundation of India (PHFI), New Delhi, India

Increased engagements in Health Policy and Systems and Research (HPSR) are critical for health system development initiatives at the country level. However, currently, India produces lower levels of policy relevant knowledge required for health systems change. This presentation reviews the key strategies employed in organising the first iteration of KEYSTONE national initiative for capacity building in HPSR and discusses our learning from its processes and future challenges.

The KEYSTONE initiative was steered by Public Health Foundation of India in its capacity as AHPSR’s Nodal Institute for health policy and systems research in the region. This initiative was undertaken jointly with premier health systems research institutes across the country. The Short-course is visualized as a specialised short course in HPSR for early and mid-career public health professionals as well as health policy and systems researchers. We discuss here the three core strategies used for organising the course and discuss merits and challenges of each of them.

Multi-institutional partnership created to govern and deliver the course created a national level platform for HPSR researchers. Rigorous selection of mid-career researchers as KEYSTONE fellows who represent diversity in disciplines, geography and sectors. The first batch of fellows are like brand ambassadors of the initiative and we expect them to advance the cause of HPSR in India. Conversion of course materials into open source materials for free use by others intend to replicate the initiative or add value to their own trainings.

The ultimate goal of KEYSTONE is to activate a nationwide community of HPSR researchers, contributing to enhanced production of relevant knowledge to meet country’s needs. KEYSTONE initiative is a humble beginning in this direction. Nonetheless, it could be the beginning of a phase transition towards higher dependence on HPSR for critical needs of health systems and policy development in India.
Rajendra Pant, Save the Children, Nepal  
Abstract ID: 861  

**Care for Possible Newborn Sepsis in the Private Sector in Nepal**  
Co-authors: Bharat Ban, Stephen Hodgins, Save the Children  

**Background:** Nepal was one of the relatively few countries that achieved MDG4 for reducing child mortality. This marked decline in child mortality has been due in part to creative approaches and serious investment in primary health care at the most peripheral level. However neonatal mortality has been a lagging indicator. As part of the effort to reduce newborn deaths, since 2005 Nepal has authorized treatment of possible newborn sepsis on an outpatient basis through its primary healthcare services. A significant number of such cases are treated in public hospitals and at the primary level (currently over 16,000 cases/year). However, the majority are treated in private clinics and medical shops. Quality of care in such settings and factors influencing provider practices have not been well characterized. Such knowledge is needed, as a basis for developing new strategies to improve outcomes for those seeking care in the private sector.  

**Methods:** The Ministry of Health and Population, leading pediatricians, social-franchising implementers, and the National Association of Chemists and Druggists (i.e. drug shop proprietors) have partnered on an assessment of care provided in the private sector. Purposive sampling for a representative sample of sites across different geographic, cultural, and urban-rural contexts was done, with semi-structured interviews with service providers involved in care of sick young infants as the main method used. Similar interviews and observations were done in public sector facilities in the same communities, to characterize the local referral system. Findings were shared with key stakeholders and strategies developed for influencing provider practices, including use of existing social franchising networks.  

**Results and Discussion:** Specific quality problems found are reported, along with factors contributing to observed patterns of care, including areas identified as being more open to change. Identified strategies will be briefly presented, along with discussion on the stakeholder decision-making process arising from the study findings.  

**Conclusions:** In South Asia and elsewhere, the private sector is the major source of sick-child care, including for newborns and young infants. Although there are important aspects of typical care that are sub-optimal, there is significant openness to certain changes in practice. Close, constructive engagement between government and private providers can open the way to creative, win-win solutions and better outcomes for newborns.
Suma Pathy, Abt Associates, India  
Abstract ID: 1797

Informal healthcare providers in the private sector in South Asia and sub-Saharan Africa: An assessment of approaches to improve their quality of care

Co-authors: Suma Pathy, Ekpenyong Ekanem, Abt Associates

Informal healthcare providers constitute a large group of practitioners in the health provider landscape, especially among rural, lower income and marginalized populations.

This paper is a literature review of studies that evaluated interventions to improve the quality of care by informal providers. Earlier work on informal providers have viewed them as a single group incorporating a variety of provider types—traditional birth attendants (TBA), traditional providers, drugs sellers and unqualified village doctors practicing western medicine. We narrowed our literature review by further sub-classifying informal providers into distinct categories, primarily by consumer utilization patterns. From previous studies on TBA/traditional provider utilization, we inferred that village doctors/drug sellers are, in the consumer’s perception, a closer substitute to qualified general practitioners than TBA or traditional providers, and have higher utilization levels, especially in South Asia. This analysis is limited to interventions focused on this specific cohort of village doctors/drug sellers and proposes approaches that could be tested in future.

We conducted an extensive literature review using search criteria related to informal providers in South Asia and Sub-Saharan Africa, published between 2000 and 2015. We applied our research selection criteria to the 139 articles that we found and selected 22 studies that related to the informal provider cohort of interest, and whether the studies assessed impact of interventions on informal provider practice. Our review showed that provider training was the predominant intervention; but was not effective in changing practice in the marketplace by itself. We identified combination approaches and grouped them as training-plus interventions in three dimensions of influence viz. market/regulatory/and consumer linkages. Market linkages include supply of pre-packaged drugs, involving pharmaceutical sales representatives in training, and creating a referral networks. Regulatory linkages ranged from accreditation to indirect support such as formalizing informal provider-public sector relationships or trainings by government officials. Interventions that have built-in patient feedback and community outreach represent consumer linkages. All the training-plus interventions successfully improved knowledge and practice among informal providers. In particular, two practice areas demonstrate significant improvement: drug dispensing practices and referral practices.

We conclude that successful interventions are those that recognize the context in which informal providers operate, and in addition to training, reduce conflicts inherent along three dimensions of environment— the market, regulators and the consumer, in which these providers practice. Health systems intervention programs need to work in all or multiple dimensions in order to improve health outcomes.
Women’s attitudes towards breast cancer screening and opportunities for integration to an outreach based reproductive screening program

Co-authors: Heather N Pedersen, Erin Moses, Josaphat K Byamugisha, Emily Wagner, Musa Sekikubo, Sheona M Mitchell, Christine Biryabarema, Deborah M Money, Gina S Ogilvie, University of British Columbia; Women’s Health Research Institute; Makerere University

Background: Globally, more women die worldwide from breast and cervical cancer than from pregnancy and childbirth, with the majority of cases occurring in low and middle income countries (LMIC). Health care systems in these regions are overwhelmed with competing priorities, underscoring the need for services that maximize resources and impact in disease prevention. As a result, some groups have called for integration of breast and cervical cancer screening programs. In this study we explore the knowledge and attitudes of women who participated in a cervical cancer screening program in Kisenyi, Uganda toward breast cancer screening.

Methods: In 2014, 500 women were screened for cervical cancer as part of a randomized controlled trial. After one year, all participants were contacted and invited to return for re-screening and to complete an interviewer-administered questionnaire in Luganda or Swahili. The questionnaire included questions on cervical cancer screening history and project participation, as well as knowledge, attitudes, and experience with family planning and breast cancer screening. A total of 166 women completed the questionnaire; here we report on the results from the breast cancer indicators.

Results: Of those who completed the questionnaire, 92.2% (N=130) had previous knowledge of breast cancer. Despite this, 96.4% (N=133) reported that they had never been screened for breast cancer. The most common reasons for not having been screened were that it was not a priority (19.8%), that screening was not available (18.6%), or that they did not have any pain or symptoms (12.8%). All (100%) women indicated that they would be willing to get a breast cancer scan at their community health centre, and 98.6% were willing to be screened for breast cancer at the same time as they received cervical cancer screening.

Conclusion: Despite high awareness of breast cancer and potential acceptability of screening, almost no participants had ever been screened, demonstrating a clear need to strengthen health care systems to improve access to these services. Rates for both breast and cervical cancer are expected to grow in LMIC without strong preventative action. The similarities between diseases in terms of the affected population and intervention opportunities indicate logical synergies for program implementation. Programs should explore integrated models for education, preventative interventions, and screening pathways for breast and cervical cancer in LMIC.
The cost effectiveness of Fluticasone-Salmeterol combined metered dose inhaler versus Beclomethasone only metered dose inhaler in the long term management of asthma, in Sri Lanka

Co-authors: Sathira Kasun Perera, Jonathan Karnon, University of Colombo; University of Adelaide

Background: The cost of combined beta agonist and corticosteroid inhalers remains to be considerably greater than steroid only inhalers in Sri Lanka. With the low availability of inhaled devices in public hospitals, patients are more likely to purchase them outside, contributing to higher out of pocket expenses. A strong justification with regard to the cost effectiveness of combined inhaler is required either to publicly fund them or for outside prescription.

Methods: The objective of this study was to perform a cost utility evaluation of the combined Fluticasone and Salmeterol metered dose inhaler (MDI) versus Beclomethasone alone MDI in the long term management of adult patients with uncontrolled asthma, in Sri Lanka. A decision analytic model was developed using Microsoft Excel 2010. Relative risk reduction of acute events related to asthma via the short and long term impact on FEV1% predicted was captured in the model. The model was fully probabilistic where distributions were generated around each input parameter. An aggregate measure of cost effectiveness (ICER) was estimated, while representing uncertainty around the mean ICER. The results were validated to Sri Lanka suing a probabilistic model calibration process.

Results: It was evident that the use of combined inhaler is a cost effective strategy for Sri Lanka, with a very low mean ICER of 182.12 USD per quality adjusted life year (QALY). However when the affordability of the patient is low, steroid only MDI is still a cost effective substitute with an ICER of 123.02 per QALY. The results were marginally sensitive to the utility values used and the decision to discount QALYs or not.

Conclusions: This model provides health policy makers new evidence required for a rational and scientific redistribution of available funding to the most cost effective treatment modalities.
James Phillips, Columbia University, United States
Abstract ID: 3343

Where the road ends: a difference-in-differences analysis of an emergency referral intervention in rural northern Ghana

Co-authors: Christopher Brian Boyer, Sneha Patel, Rofina Asuru, J. Koku Awoonor-Williams, James Phillips, Innovations for Poverty Action; Columbia University; Ghana Health Service

Background: Although Ghana has made great strides in improving health care delivery over the last two decades, maternal and perinatal mortality remain stubbornly high, especially in rural areas. A review of the literature suggests most deaths could be averted if women received timely care during medical emergencies. In 2013, the Ghana Health Service launched the Sustainable Emergency Referral Care (SERC) Initiative in three districts of the Upper East Region to test the hypothesis that access to transport and improved referral systems could save lives.

Methods: We used longitudinal data from 372 health facilities in the Upper East and Upper West Regions of Ghana to examine the impact of SERC across several key health indicators. The data were collected using the Ghana Health Service’s digital health information system over the period of January 2009 to November 2014. We performed a difference-in-differences analysis using fixed effects models to compare the performance of health facilities in the SERC network to a set of control facilities before and after the intervention.

Results: While we found no evidence that the volume of facility-based deliveries increased in SERC districts (p = 0.951), we did observe a significant shift in delivery location as the number of deliveries in hospitals and surgical care facilities increased (+29.87, 95% CI: 25.10 to 34.66) relative to lower tier facilities (-4.22, 95% CI: -6.13 to -2.32). This shift was accompanied by a 25% increase in the incidence of caesarian section deliveries in SERC districts relative to controls (IRR 1.25, 95% CI: 1.16 to 1.35) raising the rate of caesarian delivery in SERC districts to 17.9%. During the intervention period the risk of facility-based maternal mortality was significantly lower in the SERC facilities relative to the controls and the SERC facilities at baseline (p = 0.04).

Discussion/Conclusion: The results provide evidence that improved emergency referral services can lead to decreases in mortality in this setting. However further research is needed
Edward Pinto, Centre for Health and Social Justice, India  
Abstract ID: 2066

**Empowered citizen vs profit powered health business: Harnessing judicial power to challenge health as a ‘commercial good’ towards reinforcing health as a ‘public good’**

Co-authors: Edward Premdas Pinto, Centre for Health and Social Justice

**Background:** The pharmaceutical corporations and other private pro-profit health care entities have exerted enormous influence and power in India in promoting health as a commercial good, compromising ethical principles and adversely affecting patient rights and availability of affordable rational health care to the marginalized. In the absence of adequate regulation and grievance redressal mechanism, the aggrieved patients and citizens have used the power of the courts to challenge commercialised irrational care and to protect patient rights. This paper aims to interrogate the drivers and processes of using the Judicial Power to challenge commercially leaning policies and practices which in turn spiral medical mal practices and profiteering towards balancing them with patient and ethical interests, and the cumulative impact it has on health systems (HS).

**Methods:** This paper is part of a primary multi-disciplinary doctoral research based on mix-method design. The document review of 101 judgments selected through key-word search in legal data bases on drugs and medicines, technology and medical negligence and patient rights filed in courts at various levels, was triangulated with 45 in-depth interviews conducted with respondents - judges, advocates, public health and bio-ethics experts, petitioners and rational medical practitioners - selected based on qualitative research design. Atlas-ti software was used to analyse the data.

**Results:** Research points to the key role of SCI in paving the path for citizens access opened through its ‘right to life’ and ‘access to justice’ jurisprudence in weeding out irrational and hazardous drugs, challenging pro-pharma pharmaceutical policy, fill the policy vacuum on clinical trials and surrogacy, reinforce the Drug Price Control Order to consolidate essential and life-saving medicines and haul up the regulatory bodies such as medical council of India accused of corruption. In contrast, high courts are frequently accessed by the health businesses for staying and intimidating pro-people initiatives. Rather than the outcome, it is the long-drawn and resource intensive court process that tires out citizens, indicating the critical need for opportunity structures required to reinforce the public value of health. Pubic health community overwhelmingly finds the strategy and process of using courts itself - rather than final order alone - having dividends on countering policies and practices driven by unrestrained profiteering in health.

**Discussion:** Beyond addressing specific legal issues, judicious and strategic use of courts has potential for empowering citizens against marketization of health and building a discourse on the value of health as a public good.
Katrina Plamondon, Interior Health/University of British Columbia, Canada  
Abstract ID: 3211

**Building Capacity for Research in a Canadian Rural-Remote-Small Urban Health Authority: Learning from global exemplars**

Co-authors: Katrina Marie Plamondon, Deanne Taylor, Interior Health/University of British Columbia; Interior Health

The purpose of this poster is to highlight innovative capacity building strategies for using and doing research in a mixed rural, remote, and small-urban health authority in British Columbia. Many of these strategies were inspired by exemplars for evolving health research and knowledge translation systems around the world, particularly in Africa. Our poster will include reflections on what we are learning from these colleagues.

Focus/Content: Interior Health is situated in British Columbia’s southern interior, characterized by a diverse geography of remote, rural, and small urban communities. More than 19,000 employees serve a population of 731,000 in 99 municipalities, 54 First Nations, and 109 unincorporated areas scattered across more than 215,000 square kilometers (roughly the size of Ghana). With the expansion of local universities and colleges, opportunities for enhancing engagement in research activities grew over the last ten years; however, the disparate nature of our geography; a history of detachment from research; and significant constraints on funding for travel, education, and other ‘non-essential’ activities had eroded capacity to meaningfully engage or partner.

The endorsement of a 2014 Research Strategy and supports from the provincial funding agency (Michael Smith Foundation for Health Research) solidified a commitment to strengthening Interior Health’s status as an organization that engages in all aspects of health research. We strove to improve the intentionality of our research and knowledge translation partnerships, enhance engagement in using and doing research across the system, and move toward recognition as an academic health science centre.

Building on lessons emerging from knowledge translation platforms in Zambia, Cameroon, and Uganda, and inspired by models for capacity building in global health research, several initiatives marked the expansion of a capacity-focused research department in Interior Health. Enabled by web-based technologies for communication and collaboration, we lead health systems research and facilitate mentorship, practice and policy-driven research grants, knowledge translation training, and communities of practice.

Significance for sub-theme area: The strategies we are using re-imagine how we can use technology to connect people across systems in capacity building efforts, reflecting innovative ways in which we can transform health systems through using and doing research. The opportunity to learn from experiences shared by colleagues around the world enhanced our ability to overcome geographic and budget-related barriers.
This poster targets people interested in:

Using or doing research in contexts that reflect differences in culture, power, or norms Strengthening capacity for research as a means for strengthening health systems
Bridget Pratt, Nossal Institute of Global Health, University of Melbourne, Australia
Abstract ID: 716

Structuring health systems research grants programs to promote global health equity: An exploration of current practice

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

Background: Health systems research is an essential means of generating knowledge to reduce health disparities between and within countries. However, for it to do so, research funders must support health systems research that promotes health equity. This paper investigates how existing funding schemes are designed to incentivise such research in low and middle-income countries (LMICs). Methods: Semi-structured in-depth interviews were performed with seventeen grants officers working for ten health systems research funders: the Alliance for Health Policy and Systems Research, Comic Relief, Doris Duke Foundation, European Commission, International Development Research Centre, Norwegian Agency for Development Cooperation, Rockefeller Foundation, UK Department of International Development, UK Medical Research Council, and Wellcome Trust. These funders administer nine grants programs that support health systems research projects and programs in LMICs. Publically available documents and documents provided by interviewees relating to the grants programs were also collected. Data were analysed according to the principles of thematic analysis. Results: Existing grants programs promote health systems research with (up to) five key features that advance health equity: research populations who are worst-off in terms of health or poverty, research topics that advance equitable health systems, LMIC ownership of the research agenda, research capacity strengthening, and having an impact on health disparities. The different types of incentives, ranging from strong to weak, employed to encourage proposed projects having these features are documented. Conclusions: To support the field’s goal of reducing health disparities, health systems research grants programs should have robust incentives (grantmaking principles, selection criteria) for each of the five aforementioned features.
Yi Qian, School of Public Health, Fudan University, China  
Abstract ID: 792  

The perceptions on challenges for strengthening the health workforce in Laos by key stakeholders: a qualitative study  

Co-authors: Yi Qian, Fei Yan, Wei Wang, Shayna Clancy, Kongsap Akkhavong, Manithong Vonglokham, Somphou Outhensackda, Truls Ostbye, School of Public Health, Fudan University; Department of Community and Family Medicine, Duke University; National Institute of Public Health, Lao PDR  

Background: Laos is facing a critical shortage and maldistribution of health workers. The health workforce has been adopted as one of the five priorities of the National Health Sector Strategy (2013-2025). This study aims to identify, explore and better understand the key challenges for strengthening the Laotian health workforce.  

Methods: Qualitative in-depth interviews with key-stakeholders were employed in this study to achieve the research goal. Four topic guides for interviews were structured around ten topics to cover most themes from the working lifespan framework. Twenty three key stakeholders with particular insights into the current situation of the health workforce were purposively recruited.  

Results: The overarching problem is that there is a severe shortage of skilled health workers, especially in primary health facilities and rural areas. The greatest deficits are for skilled health personnel and laboratory technicians. This deficiency is related to five of the main problems discussed by the key-informants: insufficient production of health workers both in quantity and quality; a limited national budget to recruit enough health staff and provide sufficient and equitable salaries and incentives; limited management capacity of the health workforce; poor recruitment to work in rural areas; and lack of well-designed continuing education programs for professional development. These five main problems and the shortage of skilled health personnel are interrelated, both in how the issues arise and in the effect they have on one another.  

Conclusions: This study identified the key problems of the health workforce in Laos, and explored the underlying causes of and interrelationships among these problems. It is necessary to understand the situation and key challenges relating to the health workforce in Laos before implementing new policies and interventions. The specific local context should be considered carefully to ensure that the choices of target interventions are tailored to Laos.  

Key words: Health workforce; Laos; qualitative research
Emma Radovich, London School of Hygiene and Tropical Medicine, United Kingdom
Abstract ID: 1615

An in-depth examination of private sector provision of maternal care in Egypt between 1992 and 2014

Co-authors: Lenka Benova, Emma Radovich, Oona MR Campbell, London School of Hygiene and Tropical Medicine

Background: Egypt recorded commendable decreases in maternal mortality - from 106 to 33 per 100,000 live births between 1990 and 2015. However, wide socio-economic disparities in coverage of antenatal and delivery care remain – the 2014 Demographic and Health Survey (DHS) showed that 98% of women from richest households delivered in a health facility compared to only 75% from the poorest. This trend raises questions about the role of the state in providing health services as a part of maintaining a basic social safety net. Given that publicly-provided facility-based care in Egypt is geographically accessible, it may also be a warning sign that its acceptability and/or quality is suboptimal.

The objective of this analysis is to describe the proportion of antenatal and delivery care provided by the private sector in Egypt between 1992 and 2014. Secondly, we examine differences in the various types of private providers used by women from different socio-economic strata and compare the content care they report receiving.

Methods: Time trends in utilisation of private-sector providers for antenatal and delivery care are assessed for all live births to ever-married women 15-49 years occurring in the five years prior to six rounds of DHS conducted in Egypt between 1992 and 2014. Content of antenatal (seven components) and delivery (four components) care according to household wealth quintile and provider type are assessed across time.

Results: Between 1992 and 2014, the use of facility-based antenatal and delivery care increased from &lt;50% to &gt;75%. During the same period, the percentage of care provided by the private sector increased from &lt;40% in 1992 to 60%, rising among women from all wealth quintiles. Within private sector users, richer women increasingly report using more “private hospitals/clinics” whereas poorer women resort to “private doctors’ offices”. We analyse the 2014 DHS to examine whether the specific private provider type was associated with differing content of antenatal and delivery care, and how the content received by women accessing private providers compared to those using public sector services.

Conclusions: This cutting-edge research examines health-seeking behaviour data collected directly from women. It takes a context-specific approach to consider whether the type of providers and content of privately provided care differ among women from poorer and richer households; and therefore whether broad statements about inequalities in coverage of essential maternal/newborn interventions sufficiently describe the dynamics of health inequalities creation in content of care within Egypt’s fragmented health system.
Mistreatment of childbearing women in public health facilitates in Bihar, India: A mixed methods approach to definition and measurement

Co-authors: Nicole Warren, Kaveri Mayra, Yamini Atmavilas, Indrajit Chaudhuri, Krishna Rao, Johns Hopkins University School of Nursing; Oxford Policy Management; Bill and Melinda Gates Foundation; CARE India; Johns Hopkins Bloomberg School of Public Health

Title: A mixed-methods approach to describe the mistreatment of childbearing women in public health facilities among labor in Bihar, India

Background: Mistreatment of women in labor is recognized as a strong disincentive to facility-based birth and threatens progress toward reductions in maternal mortality. Increasingly, the Universal Rights of Childbearing women, defined by the White Ribbon Alliance, are the standard for all maternal care providers. In India, where institutional births have increased since a successful cash-transfer program to incentivize deliveries, nearly half of women still deliver at home. This raises questions about whether the emphasis on creating demand has been at the expense of improving the process of care at the facility level, including reducing mistreatment of women. This is a particular concern for women of socially marginalized groups. To date, there is little evidence about the nature of or frequency with which women experience mistreatment in labor in India or the health system’s responsiveness to this issue. The aim of this study is to describe what constitutes mistreatment of women in labor and estimate its prevalence in public health facilities in Bihar, India.

Methods: We are conducting a mixed-methods study at public facilities in Bihar, India. Qualitative data from an initial formative phase will inform the development of an observation checklist and survey instrument to identify and estimate the prevalence of mistreatment. Once the tools have been tested, we will use a quasi-experimental stepped wedge design to examine the mistreatment among health facilities that have or have not participated in a health system strengthening intervention. Our analysis will consider the impact of variables such as caste on mistreatment. Between June and August of 2016, 330 births will be observed across 165 different health facilities. These data will be collected as part of a broader health systems strengthening evaluation, already underway, funded by the Bill and Melinda Gates Foundation in Bihar.

Results: Field work will begin in May and data will be available in August 2017. Analysis will include consideration of clients’ social characteristics and the extent to which that may impact mistreatment.

Discussion/Conclusions. This study’s findings will contribute to reducing mistreatment in labor by developing both a locally valid tool to measure it and estimating its prevalence in public health facilities in India. These data will inform policies and programs aimed to increase the health systems’ responsiveness to mistreatment of women, especially those who are marginalized, and encourage facility-based births.
Sabina Faiz Rashid, James P Grant School of Public Health, Brac University, Bangladesh
Abstract ID: 2597

Experience of women on Menstrual Regulation (MR) services in Bangladesh: Findings from REACHOUT Research project

Co-authors: Sadia Chowdhury, Tamanna Majid, Sumona Siddiqua, Sabina Faiz Rashid, James P Grant School of Public Health, Brac University

Background: REACHOUT is an international five year project on implementation research and delivery science (IRDS), which aims to understand and strengthen the role of close-to-community (CTC) health workers. This is critical in the context of a multitude of private, public and informal actors providing services in Bangladesh. The team led by James. P. Grant School of Public Health, BRAC University, focuses on menstrual regulation (MR) services, a procedure to safely establish non-pregnancy up to 8-10 weeks after a missed menstrual period. The project is working with 2 organisations to improve services.

Objective: To understand the experiences of the women seeking MR services and uptake of formal referrals

Method: Qualitative research conducted in 2015, included in-depth-interviews with 15 (12 had undergone MR and 3 who did not take up the referral) at baseline, and 11 women (7 had MR and 4 did not take up referral) from Dhaka city, including urban slums. Transcriptions, coding and thematic outputs were generated. Atlas. ti software was used.

Results: Most of the clients had chosen the clinic for MR services due to referrals by CTCs. Other reasons include, proximity of formal facilities, lack of information on other options, referred by drug sellers at pharmacies, who were part of the two organisations network of CTC informal providers. Some of the women also based their choice on feedback from other women who shared satisfaction with services. Women who chose not to take up referrals cited late identification of pregnancy beyond the safe period, and ensuing rejection from clinics. Fear and confusion of the MR process, stigma of seeking a termination, and aversion to an invasive procedure, and costs were other factors that deterred women. Almost every MR client mentioned that they initially disclosed their pregnancy with their husbands, who were generally supportive. Some shared with neighbours and family members and sought their advice on where to go and whom to access.

Conclusion: A more structured referral service linking both the public, private and informal sector, would go a long way to reduce women’s anxieties and improve access to safe services, to make informed choices. The role of CTCs in not only providing information, but following up and tracking clients to ensure safe services are sought is critical. CTC providers can also play a vital role in providing comprehensive information to women and communities, as well as the dangers of seeking care from unqualified and clandestine operators.
Implementation research on strengthening service provision of reproductive services by close to community providers: lessons from REACHOUT, Bangladesh

Co-authors: Ilias Mahmud, Sabina Faiz Rashid, Sadia Chowdhury, Salauddin Biswas, Irin Akhter, Mahfuza Rifat, Malabika Sarker, James P. Grant School of Public Health

Background: REACHOUT is an international five year project on implementation research and delivery science (IRDs), which aims to understand and strengthen the role of close-to-community (CTC) health workers. Bangladesh team led by James P. Grant School of Public Health BRAC University, focuses on menstrual regulation (MR), a procedure to safely establish non-pregnancy up to 8-10 weeks after a missed menstrual period. Poor women in rural areas and urban slums remain vulnerable to making risky choices, because of the multitude of public, informal, private and clandestine providers who operate unregulated. This implementation research is being conducted with 2 organisations providing legal MR services.

Objective: To conduct implementation research and strengthen the role of close-to-community (CTC) health workers, focusing menstrual regulation (MR).

Method: Intervention activities encompassed facilitative referrals and supportive supervision training to increase CTC providers’ motivation and efficiency and the revision of existing referral cards to track referrals so women seek safe MR services. A contextual analysis was conducted at baseline. Standard training manual was adapted and developed for supervision and facilitative referral training respectively.

Combination of quantitative and qualitative methods was used: program assessment tool, motivational outcome and supervision-questionnaires, referral and supervision tracking tools and in-depth interviews. Continual meetings were conducted with organisational heads. Ongoing process documentation was conducted. Observations also took place in terms of trainings and supervision. Data collection of first phase ended in November, 2015.

Results: The context analysis found that poor referrals led to unsafe and uninformed choices, weak supervision was creating inefficiency and an absence of follow up of poor women by CTCs. A series of trainings aimed to enhance the relation between CTC providers and their supervisors on positive rather than disciplinary approaches, and training on referrals and cards with ID numbers to track clients were introduced. Both implementing organisations were supportive. Perceived benefits were recognised by CTCs and women. Regular meetings and dialogues was critical to avoid implementation disruption due to turnover of senior management. To promote ownership joint development of training manuals, involving trainers from organisations facilitated implementation of new components.

Conclusions: Implementation research is a continuous process and should be developed and adapted according to context specific needs. Innovations added to existing structures interventions was seen as feasible and acceptable by implementing organizations as well as the CTCs. Strengthening monitoring process, accountability and recognition of hard work by the CTCs is critical. Intervention targeting multi-layer of supervisors is necessary for sustainability.
Joanna Raven, Liverpool School of Tropical Medicine, United Kingdom
Abstract ID: 2331

Conducting research during the Ebola crisis: optimising partnerships through the ELRHA initiative

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Background: In response to the Ebola epidemic in West Africa, a special funding window was launched by ELRHA (Enhancing Learning and Research for Humanitarian Assistance) through the Research for Health in Humanitarian Crises programme (R2HC). This aimed to fund robust research contributing to the effectiveness of the outbreak response and drawing lessons for future outbreaks of Ebola and other communicable diseases. The call for proposals generated significant interest from research and humanitarian communities and resulted in eight research institutions being funded to undertake studies. In 2015/16, this mechanism was reviewed to document how the research findings were used during and after the epidemic, to explore the effectiveness of operational partnerships, and to capture challenges and lessons learned.

Methods: Twenty-nine in-depth interviews were conducted with principal investigators of the funded projects, ELRHA programme staff, donors and Funding committee members, and in country partners or end users of the research. Documents, which included R2HC Ebola Call for Proposals Guidelines, full proposals, reports and outputs such as peer reviewed publications and workshop presentations of the funded projects were reviewed. A thematic analysis was undertaken.

Results: During the Ebola crisis there was uptake of ‘real time’ research findings by governments of affected countries, international partners, UN agencies and NGOs: health messages generated through research were adopted by the Ministry of Health in Sierra Leone; research findings were included in weekly Epidemiology Briefs that informed international strategy; an Anthropology Platform provided advice on engaging with crucial socio-cultural dimensions of the Ebola outbreak. Strong on-the-ground partnerships were fundamental to ensuring uptake of the research findings. Other achievements included publications in peer reviewed journals and further development of tools for use in future public health emergencies.

Challenges in implementing the call and carrying out the research focused around the timing of the call and the unpredictable evolution of the outbreak, ensuring robust but rapid reviews of proposals, fostering flexibility so the research could be responsive to rapidly changing research needs on the ground, and a range of ethical challenges - in particular not distracting staff and resources from the operational response.

Conclusions: Although challenging, it is possible and valuable to conduct research during a public health crisis. Effective partnership and close engagement between researchers and end users can ensure immediate uptake of research findings. Most importantly, research should be responsive to the changing needs of the crisis and closely linked to the operational response.
Daniel Reidpath, Monash University, United Kingdom
Abstract ID: 1987

**Improving health service affordability for NCD patients in rural China: A preliminary evaluation of China’s service equalisation policy**

Co-authors: Weiyan Jian, Adrienne N Poon, Guofeng Liu, Daniel D Reidpath, Kit Yee Chan, Peking University Health Science Centre; George Washington University; Monash University (Malaysia); University of Edinburgh

Background: Improving health system responsiveness and reducing rural-urban health service inequality were key goals of China’s 2009 health reform. While rural insurance enrolment has reached 92.5%, coverage levels remain low. This study evaluates changes in the economic burden of health service utilisation between rural and urban residents with chronic non-communicable diseases (NCDs), which account for an estimated 82% of China’s disease burden.

Methods: The study uses the 2011 and 2013 China Health and Retirement Longitudinal Study (CHARLS) of a nationally representative sample of 17,596 individuals age 45 and above from 28 of China’s 31 provinces. Eight economic burden indicators (3 outpatient, 5 inpatient) were constructed from expenditure data relating to patients’ last outpatient visit in the past 4 weeks and last inpatient service utilisation in the past year. Linear Probability Models (LPM) and Fixed Effect Models (FEM) were used to calculate changes in the indicators between the two time intervals for urban and rural NCD patients after controlling for variables including age, gender, education, disease, insurance and local GDP.

Results: Significant decreases were found in the proportion of NCD patients who paid completely out-of-pocket (OOP) for utilisation of both outpatient and inpatient services (Outpatient urban=6%, rural=9.4%; Inpatient urban=12, rural=5.3%). Reductions were also observed in out-of-pocket-payment as a proportion of direct service expenditure for outpatient (urban=9%; rural=5%) and inpatient services (urban=4%; rural=7.6%). No significant changes in the size of rural-urban gaps were observed for these indicators. Alarminghly, OOP payment as a portion of household expenditure increased significantly by 5.4% for rural (from 23.8% in 2011 to 29.2% in 2013) and 15.5% for urban inpatients (from 19.7% in 2011 to 35.3% in 2013). Moreover, the proportion of rural patients discharged earlier due to financial difficulties rose sharply from 40.4% to 60.4%, while a 4% fall was observed in urban areas from 32.8%to 28.3%!

Discussion/Conclusions: Overall the results indicate that China’s health insurance reform was effective in reducing patient co-payment across inpatient and outpatient services for both rural and urban NCD patients. This, however, has done little to narrow the gap in the economic burden. Despite increased insurance coverage, inpatient services became progressively unaffordable to rural NCD patients. In light of rising health care cost and chronic NCD burden, shifting NCD management to outpatient services is essential to easing the economic cost of NCD and promoting health service affordability and equity, especially for rural patients.
Heidi Reynolds, University of North Carolina, United States
Abstract ID: 3188

Operationalizing a Learning System in a Large Complex Project to Maximize Health Information System Strengthening Investments.

Co-authors: Heidi W Reynolds, University of North Carolina

Background: What do we know about how to maximize the impact of large complex projects that aim to build responsive and resilient health systems in low- and middle-income countries? What are experiences and approaches employed so that planning improves, adequate solutions are identified, and evidence communicated and shared? The MEASURE Evaluation project is a five-year cooperative agreement with the United States Agency for International Development (USAID). This multi-country, multi-million dollar, multi-partner project works to strengthen health systems by improving countries’ ability to gather, interpret, and use data for decision making and maximize health program impact. This presentation will describe the systems and approaches to increase reciprocal learning and evaluation in order to build the evidence about what works to strengthen health information systems (HIS) and account for the US government’s investments in HIS.

Methods: We defined our shared vision by articulating three overarching questions: What are the factors and conditions of HIS performance progress? What are the stages of progression to a strong HIS, and how are they measured? What are the characteristics of a strong HIS? We adopted practices to increase organizational learning including employing systems thinking. As a foundation, we developed a theoretical model of HIS strengthening, which we are using to develop a shared vision and lexicon. We use the projects’ own monitoring data to identify opportunities for deeper study, map them to the model, gather additional data, and synthesize experiences to build a narrative about how HIS strengthening occurs. A technical advisory group and multiple formal and informal mechanisms are employed to engage project staff.

Results: A work in progress, our learning system is improving our ability to communicate about how the interventions are working to improve HIS performance, health systems functions, and health outcomes. It is strengthening the skills and capacities of our staff and partners to articulate how investments are leading to HIS performance improvement. The changes to the organizational culture have resulted in more opportunities for sharing and learning.

Conclusions: As a result, our country partners will have better information about how investments have improved HIS. The concept and process of developing and implementing the learning system will be of interest to donors, managers, and actors involved in large complex projects and organizations who want to harness the breadth and depth of the investments and talent of staff to create a whole that is bigger than the sum of its parts.
Jenny Ruducha, Boston University School of Public Health, United States

Abstract ID: 3214

**Assessing the Integration of Self Help Groups into Local Health Systems through Social Network Analysis**

Co-authors: Jenny Ruducha, James Potter, Danish Ahmad, Kapil Patil, Sanjit Sarkar, Robin LeMaire, Boston University School of Public Health; Public Health Foundation of India; Rajiv Gandhi Mahila Vikas Pariyojana; Virginia Commonwealth University

Background: A social network analysis (SNA) was conducted as part of the evaluation strategy for the Uttar Pradesh, India Community Mobilization Project, a 5-year MNCH initiative designed to disseminate key MNCH messages to hard-to-reach populations, as well as strengthen linkages with between the community and the local health system, by means of local womens’ Self Help Groups (SHGs).

Methods: Two types of social network data were collected: 1) egocentric network data of Recently Delivered Women (RDWs) to assess the local information and advice networks of the target population, and 2) sociometric network data of local village and Block-level stakeholders involved in health production, including members of the formal health system but also informal providers, government functionaries and SHG members. Baseline data was collected at the beginning of project implementation (N = 408) and Endline data was collected two years later (N = 707). The Endline also included a qualitative interview element conducted with a subset of respondents for additional insight into the network data. Analysis for both Baseline and Endline began with a visual evaluation of plots, followed by the analysis of relevant network measures and statistics. Logistic regression analyses and qualitative comparative analysis were conducted to assess associations between health behaviors and local network characteristics, using data from this study as well as another household survey.

Results & Discussion: At Baseline, SHG members trained in MNCH topics were not found to be significant members of local health networks and were only occasionally cited by other SHG members as sources of information. Government front-line health workers were strongly involved in all aspects of local health production, regardless of SHG membership status. Village level health workers, however, were not often connected with the local SHG platforms. Endline data is currently under analysis, but preliminary results suggest that the linkages between local SHG platforms and local government health workers have improved, but not uniformly across all project areas. Further analysis will investigate the factors behind these results.

Conclusions: Health systems, as well as the advice networks of village women, are responsive to community mobilization interventions. In this study, we show how different measures of local health system networks are associated with different health outcomes, as well as how the implementation of an MNCH intervention through an SHG Platform has been associated with changes in health behaviors and the improved linkages with the local health system.
ALEXIS RULISA, Rwanda Biomedical Center (RBC), Rwanda
Abstract ID: 293

The contribution of rice farmers towards malaria elimination: the case of Ruhuha community in Eastern Rwanda

Co-authors: ALEXIS RULISA, Fred KAATERA, Emmanuel HAKIZIMANA, Leon MUTESA, Luuk Van Kempen, Rwanda Biomedical Center (RBC); University of Rwanda; Radboud University Nijmegen

Background: Economic activities may entail negative externalities for public health. The case of rice farming in eastern Rwanda fits this description, as it provides breeding sites for malaria-infested mosquitoes, creating significant malaria risk but at the same time generates cash income and improves nutritional standards locally. So far, none of the interventions that have been proven to be effective in tackling rice farming-induced mosquito breeding sites has been implemented in Ruhuha. Therefore, a project that aims to eliminate malaria in this area funded a larviciding intervention with Bacillus thuringiensis israelensis (Bti), but for just one rice cultivation season (semester). Future interventions will thus depend on co-payment of rice farmers and the wider community. The first study aims to assess the impact of rice farming to malaria risk while the second, conducted prior to Bti application, aims to assess the resources mobilization among rice farmers for larviciding.

Methods: To this purpose, a large-scale survey was conducted among more than 4,000 households in the area from June to December 2013. Data on household demographics, economic status, malaria prevention efforts as well as health-seeking behaviour has been collected. All household members have also been screened for malaria parasitemia and anaemia, and a malnutrition assessment was carried out for under-five children.

To assess the resources mobilization for malaria elimination, a cross-sectional study has been conducted in January 2015. Out of 1,914 rice farmers organized into four cooperatives, 320 farmers were randomly selected to participate in this study. The maximum willingness to pay (WTP) was elicited through a contingent valuation exercise using the “bidding game method”.

Results: It is shown that rice farming is positively and significantly associated with households’ wealth, food security, health insurance status, and protection against malaria. At the same time, it is confirmed that rice farming practices increase the risk of malaria transmission through expanded mosquito populations.

For the resources mobilization, the mean WTP was US$ 2.2 per rice farmer per season. The median WTP revealed that 50% of the rice farmers were willing to pay at least US$ 1.4.

Conclusion: Rice farming leads to private benefits in the economic domain, which spills over into the health domain, but at the same time creates a public health risk. The reported WTP levels show that rice farmers can cover one fourth (1/4) of the full intervention cost. To fill this gap, other community members and the Government need to be involved.
Jude Rwemisisi, Amsterdam Institute of Social Science Research, University of Amsterdam, Netherlands

Abstract ID: 2461

**Growing youth population and the evolving role of Ssengas: implications for sexual and reproductive health communication policy in Uganda**

Co-authors: Jude Tibemanya Rwemisisi, Amsterdam Institute of Social Science Research, University of Amsterdam

**Background:** With 78% of the Ugandan population under 30 years of age and 72% under 24 years, the population is dominated by a sexually active age-group. Relatedly, demand for information on sexual and reproductive health (SRH) is growing yet young people’s access to information on SRH is limited and minimal research is conducted to document available local resources for sustainable transmission of SRH information to youth. This research collaboration between Makerere University and University of Amsterdam (CoHeRe) aimed at documenting local potential for development of sustainable SRH and gauge capacity of local communication systems to communicate SRH and other health messages with minimal external intervention.

**Methods:** The data on Ssengas (paternal aunties) is extracted from an 18 months’ ethnography obtained through immersion in the community through participant observation at people’s homes, village trading centres and social functions including child-naming rituals, sex education sessions, traditional weddings, heir installation, board games, video shows, village meetings and fundraisings. Informal conversations and interviews were held with five key informants. Overall, 100 young people (19-30 years) and 132 older residents (30-80 years) participated. 24 focus group discussions were held with female youth, male youth, elderly female, elderly male. The study area covered six villages of Kagugo parish, Luwero district in Uganda.

**Results:** Findings indicate that the influence and roles of Ssengas, Buganda’s traditional custodians of information on SRH, have since reduced as communities sought emerging alternative resources including senior teachers, peers, radio programs, video halls, traditional healers, worship centers and mobile phones for SRH information. Ssengas have less youth seeking their counsel but remain active in the traditional marriage process. Participants attributed Ssengas’ evolving influence to cultural transformation including increased tolerance of informal cohabitation, changing settlement patterns, urbanisation and commercialization. Health workers at grassroots were inadequately motivated to effectively immerse into the community and recommend necessary policy adjustments.

**Conclusion:** The unprecedented evolution of Ssengas’ roles and expansion of the local information resource for SRH calls for health workers to immerse in communities for timely detection and adjustment of health communication strategies to social changes affecting communication and implementation of SRH and other health programs. Health policy may be adjusted to utilise the emerging alternative resources for information.
Emma Sacks, Johns Hopkins School of Public Health, United States
Abstract ID: 128

Examining domains of community health nurse satisfaction and motivation: results from a mixed-methods baseline evaluation in rural Ghana

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Background: A strong health system requires a competent and caring workforce. A more satisfied and motivated health workforce should be more willing to serve in difficult areas, have lower turnover, and theoretically provide better care to patients. This paper examines the motivation, satisfaction, and correlation with clinical knowledge, of community health nurses (CHNs), a cadre of provider focused on maternal, newborn and child health in rural Ghana.

Methods: This study employed three methods of evaluation. Two quantitative measurements were used: (1) a survey of health worker satisfaction and motivation and (2) a clinical knowledge assessment focusing on maternal, newborn and child health. Both were administered to all rostered CHNs working in the five sampled districts in the Greater Accra and Volta regions in Eastern Ghana (N = 205). Qualitative interviews (N = 29) and focus group discussions (N = 4) were held with selected CHNs in the same districts. These data were analysed using NVivo (Version 10) and Stata (Version 13.0) based on domains of extrinsic and intrinsic motivation including general satisfaction, work environment and access to resources, respect and recognition received and opportunities for advancement.

Results: CHNs desired more training, especially those who were posted at the community level (a Community-based Health Planning and Services post or “CHPS”) versus at a health facility. CHNs working at CHPS believed their work to be more difficult than those posted at health facilities, due to challenges associated with foot travel to visit patients at home, and they were more likely to report having insufficient resources to do their jobs (48% vs 36%). However, CHNs posted at health facilities were more likely to report insufficient opportunities for career advancement than the CHPS nurses (49% vs 33%). CHNs generally reported good relationships with colleagues and being respected by patients but desired more respect from supervisors. The median score on the knowledge assessment was 78%. On average, subgroups of CHNs with different reported levels of satisfaction did not perform differently on the knowledge assessment.

Conclusions: CHNs in Ghana were satisfied overall but desired more training, more guidance and supervision, fair pay and opportunities to advance in their career. Improving health worker satisfaction and morale may be important for health worker retention and certain aspects of care but may not have a significant influence on clinical knowledge or performance.
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Abstract ID: 677

Impact of a pharmacist-led medication therapy management program among type 2 diabetes mellitus patients: A non-clinical randomized control trial

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Objective: The study aims to evaluate the impact of a pharmacist-led Medication Therapy Management Program (MTMP) tailored for Type 2 Diabetes Mellitus (T2DM) patients with the goal of improving their diabetes related knowledge, medication adherence, glycemic control and Health Related Quality of Life (HRQoL).

Method: A non-clinical randomised controlled trial was conducted in a public sector hospital of Sargodha, Pakistan whereby participants received an educational intervention through the MTMP led by a pharmacist. A total of 392 patients were randomly assigned to intervention (IG) and control group (CG) with 196 patients in each arm. Medication adherence, diabetes related knowledge and HRQoL were assessed by 8-item Morisky Medication Adherence Scale, the 14-item Michigan Diabetes Knowledge Test and EuroQoL EQ-5D respectively. HbA1c values were taken from the medical records of the patients.

Results: The main outcome measures were diabetes related knowledge, medication adherence, HbA1c and HRQoL, measured at baseline and at three months. At baseline, diabetes related knowledge was reported average (7.99±2.65, 8.03 ±2.49) in IG and as well as in CG. Poor medication adherence and glycemic control was also reported in both groups [4.54±1.69 (IG), 4.41 ± 1.84(CG)] and [9.47±1.57 (IG), 9.41±1.57 (CG)]. Additionally, both groups reported lower HRQoL. At the end of the MTMP sessions, inter- group comparison reported a statistical significant increase in mean diabetes related knowledge score (10.55±2.56), adherence score (5.24±1.48), HRQoL status (0.6115±0.286) among the IG with an improved glycemic (8.97±1.362) control. The intra- group comparison between the pre- and post- IG was also significant (p<0.001). However, there was no significant changes reported among the CG.

Conclusion: This study provides new evidence, from a non-clinical randomized controlled trial, of the beneficial effect of pharmacist intervention in the clinical management of T2DM patient. The pharmacist-led MTMP was successful as it decreased HbA1c values that is a positive indicator of a successful T2DM therapy. Therefore, healthcare systems specially deficient of human resources and infrastructure can sustain pharmaceutical care and expenditures by involving pharmacists as a health educator and counsellor in the existing treatment protocols.
Prasanna Saligram, Public Health Foundation of India, India  
Abstract ID: 2382

Power and politics of the health professionals in decentralized and devolved local participatory governance: a study of Panchayats and health services in Kerala, India

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Introduction: The political dominance and power of health professionals over other social groups and even within health systems is extensively documented. Local participatory governance (LPG) reforms, which increase political decentralization and allow for local devolved discretionary power, are theorized to improve health system responsiveness. In India, LPG is synonymous with Panchayati Raj Institutions (PRIs) - locally elected bodies (Panchayats) with financial and administrative devolved powers over social services including health services. Kerala is a state where PRI reform is extensively implemented. This paper examines how power and politics of the health professionals operate within the devolved LPG reforms.

Methods: Qualitative methodologies were employed to understand how LPG reforms improved health system responsiveness. Pain and palliative care (PPC) and kidney patient welfare society initiatives were used as tracers for the study. In-depth interviews (n=26) were conducted with PRI members, health systems actors and key informants and focus group discussions (n=7) were held with community groups and service providers. The data collected was translated and transcribed, coded and analyzed using the framework approach.

Results: The health department was not devolved completely and hence health personnel were subjected to ‘dual power control’ - by both the health department and PRI. Health facility staff was upwardly accountable to the health department and its programs but at the same time were under pressure from PRI to respond to local health needs. PRIs could initiate such local actions as starting dialysis centers at public facilities with health department cooperation or buying medicines locally for PPC, but did not have the power to recruit medical personnel for marginalized areas or for filling vacancies. Ground level health staff wanted to respond to local issues, for instance on lifestyle modification to tackle chronic diseases, but were unable to because of programmatic overload and staff vacancies. The health department acknowledged PRI’s support, for instance, in developing health infrastructure or mobilizing the community for immunization, but felt PRIs had no role and competence in either appointing medical staff or in assigning roles for them.

Conclusion: While there was cooperation programatically between LPG and health department, the practice of power was much more nuanced on structural matters and affected the relationship between LPG institutions and health systems leading to sub-optimal health services provision. Next level of devolution reforms might be needed which is sensitive to the power dynamics if both these institutions were to be more responsive to people’s health needs.
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Abstract ID: 2072

Health Systems’ Response towards Agenda Setting for ‘Transforming Nurse Leadership’: Learning from two States in India

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Introduction: The government of India’s recent commitments towards Universal Health Coverage (UHC) are based on multiple pillars, of which a significant one is strengthening the nursing cadre. Several expert groups and commissions appointed by central government in the past to study the health sector have recommended several reforms in the area of nursing sector. One of the key reform suggested is, ‘Transforming Nurse Leadership’ by placing nurses in more empowered positions within the organization of government health services. Drawing on agenda setting as a crucial step in policy cycle, this paper sets out to explore how health systems’ have responded towards transforming leadership among nurses in two states of India.

Methodology: This exploratory study was conducted in Jammu & Kashmir (J&K) and West Bengal (WB) during 2015-2016. Data were collected through key informant interviews (KIs) and in-depth interviews (IDIs) using interview guides with a wide range of respondents - nurses, medical professionals, and programme managers. The data was thematically analyzed using framework approach for applied policy analysis.

Results: Both the states had a long history of nursing, however, differences were observed in the functioning and levels of responsiveness towards transforming nurse leaderships. There were sporadic advocacy measures by nurses, and political interventions happening to reform nursing profession in J&K, however, the recognition that imparting leadership is essential, seemed to be lacking at all levels of health system. Reasons included – political instability, lack of magnanimity within system, medical dominance, perceptions about nurses’ incapability for leadership role and inadequate capacity building programs for nurses. In WB, however, way back in 1950s the need for imparting leadership to nurses was well recognised by state authorities. Steps were taken in creating leadership positions, and were supported by state politicians and bureaucrats. The outcome is witnessed in establishment of nursing section within the directorate of health services (DHS) run by 17 nurses being headed by Joint DHS (nursing). Nonetheless, nurses in both the states shared a ‘common vision’ of having a separate nursing directorate in the future.

Conclusion: Recognition of the capabilities of nursing cadre, and their professional potential is very crucial in setting agenda for transforming nurse leadership. An understanding of how both the states have responded has a learning for further harnessing systems responsiveness for reforming nursing profession towards strengthening health systems for achieving UHC, and must include a consideration of the broader socio-political context within which the nursing profession is embedded.
Miguel San Sebastian, Epidemiology and Global Health, Sweden
Abstract ID: 1320

Health care on equal terms? The case of Northern Sweden

Co-authors: Miguel San Sebastian, Paola Mosquera, Nawi Ng, Per E Gustafsson, Epidemiology and Global Health

Background: While the Swedish health care system has a long-standing tradition of tax-financed and publically provided healthcare, it has also successively moved towards increased market-orientation, which has raised concerns as to whether Sweden still offers health on equal terms. To explore this issue, this study aimed i) to assess if the principles of horizontal equity (equal access for equal need regardless of socio-economic factors) are met in northern Sweden 2006-2014; ii) to explore the contribution of different factors to the inequalities in access along the same period.

Methods: The data come from a series of cross-sectional household surveys known as “Health in equal terms” carried out in 2006, 2010 and 2014 by the four northern-most counties in Sweden. The target population includes 16-84-year-old residents. The horizontal inequity index (HII) was calculated based on variables representing a) the individual socioeconomic status (income), b) the health care needs (age, sex, self-reported health), c) non-need factors (education, social support, immigration background, and rurality as well as d) health care utilization (general practitioner (GP), specialist doctors, hospitalization) in the last 3 months. A positive HII indicates horizontal inequities favouring the better-off. To fulfill the second aim, a decomposition analysis of the concentration index for need-standardized health care utilization was applied.

Results: Concentration indices were all negative indicating a higher use of the three health care utilization variables by people with fewer resources. The HII of the utilization of GPs was positive during the three surveys indicating a higher use of the service by rich people. The use of specialist showed a pro-rich orientation in the first and last surveys but becoming pro-poor in the 2010. In contrast, the pattern for hospitalization use was concentrated among the poor in all three surveys, but with a clear time trend towards equality.

Pro-poor inequalities in healthcare use were explained mainly by greater healthcare needs among those with lower levels of self-rated health across the three survey years and utilization outcomes. Overall non-need factors were contributing toward a pro-rich utilization, with income, education and type of municipality playing a moderate role in the use of GP and specialist in 2014.

Conclusion: While health care utilization can be considered equitable regarding specialist and hospital use, the increasing pro-rich trend in the use of GP is a concern. Further studies are required to investigate the reasons and a constant monitoring of socioeconomic differences in health care access is recommended.
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Abstract ID: 948

**Missing and Mystery: Situation of internal migrant data in routine health information system in Myanmar**

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**Background:** Ayeyawady Region is delta area in Myanmar having many internal migrants moving from one village to another depending on job opportunity. Recording of migrant information and providing maternal and child health (MCH) care for them is a challenge. This study aimed to explore current situation of migrant data in routine health information system and its consequence on access to MCH care of migrants.

**Methods:** Cross-section study was conducted in 87 villages of Bogale and Mawlamyinegyun Townships, Ayeyawady Region in 2014. Twenty-five key informant interviews with Basic Health Staff (BHS) and 30 Auxiliary Midwives (AMW) were conducted. Fifteen Focus Group Discussions with migrant mothers having at least a child of under two years of age were also done. Thematic analysis was carried out with assistance of ATLAS ti version 5.2 software.

**Results:** Almost all service providers and migrant mothers were aware that there was difference in access to MCH care between migrants and residents. Some estimated that three out of ten migrant mothers would not get four antenatal (AN) visits and six out of ten children would not complete immunization. Information of internal migrants was not recorded in routine health information systems (HIS) such as AN register, delivery record, due list for Expended Programme of Immunization. Only a few BHS and AMWs recorded migrant information in their own records. The main reasons for excluding migrants in HIS were uncertainty of duration of stay, taking lists from previous health care record which has already excluded migrants and not to be complicated with health statistics/data. Migrants and some key informants stated that migrant have to report local authority if they entered into respective village. However it depended on villages. Some migrant mothers stated that they did not bring their children to have immunization because their names were not included in the list of Midwife. Some thought that they were not entitled to receive MCH care in temporary residential villages as their family was not include in household list. Although information of migrants was recorded by some local authority, sharing of such information to health staff was substantial. As a consequence of missing migrant information, migrants were less access to routine MCH services.

**Discussion/Conclusion:** Missing of migrant data in routine HIS leads to less access of health care services by migrants. As a responsive health system, it is crucial for inclusion of migrant information in routine HIS in order to improve access to services.
Development of a Global Database for Health Policy and Systems Research Training Opportunities

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Purpose: Capacity-building opportunities need to expand to support the growing field of Health Policy and Systems Research (HPSR). In 2014, the Thematic Working Group (TWG) on Teaching and Learning HPSR in Health Systems Global mapped the existing training opportunities in HPSR around the world. To promote existing training and access to materials, we created an online database of HPSR trainings, including a repository of open access training materials. This database is a valuable tool for those wishing to participate in, establish, or support HPSR training programs.

Focus/content: The global mapping study for HPSR training included structured online searches, a global survey of HPSR courses, and key informant interviews with instructors to identify as many existing training opportunities as possible. Building on this study, respondents were asked to provide materials for inclusion into an accessible and easy-to-use online database for students, faculty, institutions, and donors to use in promoting and strengthening their work. We created a database, pilot-tested it in April 2015, and have since continued to expand its content and functionality. The database can be viewed at (http://courses.healthsystemsglobal.org/). Training opportunities from the original study were used as a starting point, but, via the networks of Health Systems Global, contributors to the database, and the study team, we have identified many additional training opportunities. Currently, the database includes over 70 training opportunities worldwide, and a growing collection of syllabi, lecture materials, and other supporting documents.

Significance for the sub-theme/field-building dimension: This database has the potential to provide an openly available, up-to-date, and inclusive space where numerous stakeholders including faculty, students, donors, and others can go to assess gaps in available training opportunities, look for example materials for use in curricula, or identify opportunities for collaboration and learning. In addition to the specific training opportunities that are listed, we also link to a growing number of related repositories of both training opportunities and other resources and ideas. We envision this space as a hub where information can be aggregated and easily found, ideas and interests can be linked with expertise and opportunities, and it can facilitate strategic and effective approaches to strengthening teaching and learning in the field of HPSR.

Target audience: This poster is of interest to HPSR faculty and others in capacity-building positions who are looking for new ideas, resources, and collaborators, for funders to have an overview of available HPSR training, and for students seeking training opportunities.
Sophia Schlette, Public Health Foundation (Stiftung Gesundheit), Germany
Abstract ID: 3289

Navigating needs, resources, and regulations. Integrated care for older people living at home in Europe. Findings from the Horizon2020 project SUSTAIN

Co-authors: Sophia Schlette, Public Health Foundation (Stiftung Gesundheit)

Introduction: In the 90s Germany embarked on a series of reforms aimed at facilitating care coordination. Regulatory restrictions were lifted and financial incentives offered to integrate care pilots with a focus on population management. However, take up remained slow, varied regionally, and did not surpass the silos of health and long-term care. Under the Sustainable tailored integrated care for older people in Europe (SUSTAIN) project, two integrated care initiatives were selected for comparisons with similar European approaches. These German initiatives are: (i) “KV RegioMed Zentrum Templin”, a large, sparsely populated district with 23% of the population aged 65+. By 2030, 1 in 5 of the population is expected to be over 65. A nurse-led geriatric practice integrated with the local hospital runs a complex therapy programme for 15 patients per week. (ii) “Careworks Berlin” is a LTC organization serving a population of 180.000 inhabitants, offering home healthcare, social activities, assisted living, to medication management, rehabilitation, case management after hospital discharge. Here, therapists are key as patient navigators.

Methods: Baseline assessments and stakeholder workshops were conducted in parallel in 14 case sites from seven European countries. At each site, semi-structured interviews were conducted with four key informants (organization manager, health professional, patient and carer) about contextual factors (policies, leadership, innovation, sustainability, resilience) and about four research domains: patient-centeredness, prevention-orientation, efficiency, and safety. Patients and carers were asked about these four key domains. Themes that emerged from interviews were used as starting point to work on a set of tailored improvements defined, agreed and implemented with stakeholders.

Detailed information about each initiative, barriers and enablers of implementation, resources needed, user perspective and possibilities about scaling-up and transferability are some of the expected outcomes.

Discussion/Conclusion: These baseline assessments were a first step towards a better understanding of challenges that eldercare initiatives are facing. Throughout the project (~2019), country-specific results in all case sites will be assessed to evaluate its applicability and adaptability to other health systems. Acting as facilitators and consultants at the same time, SUSTAIN researchers will work with local stakeholders using implementation science techniques such as the evidence integration triangle. It is expected that in combination, research and translational capabilities of the project team will contribute to making integrated care for elderly patients more comprehensive, patient-centered, prevention-oriented, efficient, safe, and sustainable. Findings will be synthesized and translated into a how-to guide (“roadmap”) to assist decision-makers embarking on integrated care.
Elena Schmidt, Sightsavers, United Kingdom
Abstract ID: 1303

Responding to health seeking behaviour in the geographically complex Indian Sunderbans: a geo-enhanced HMIS

Co-authors: Emma Jolley, Andy Tate, Sightsavers

The Sunderbans in the Indian state of West Bengal is a geographically unique region comprised of small islands. It is an area of extreme poverty, with almost half of the 4.7 million population belonging to historically marginalised groups such as scheduled castes and tribes. The economic, social and geographic isolation of the Sunderbans means that the population is disproportionally afflicted by eye health concerns, with a higher than average prevalence of blindness.

According to a recent study, health services in the area are sparsely and unevenly distributed, with much of the population relying on irregular and mobile health services. Unregulated health workers tend to be the cheapest and most convenient and there is shortage of official cadres. There is also a lack of linked referral transport, making uptake of specialist services a challenge.

A geo-referenced population based survey was conducted at the start of the intervention in order to inform programme design. It also enabled us to identify key baseline indicators for us to later measure progress and estimate the achieved impact. Subsequently, 15 vision centres providing primary eye care services have been opened across the Sunderbans area. The HMIS in these centres has been adapted to capture data on where patients live. When patient records are collated, they are imported into a GIS with each patient and their data represented by a marker according to their home village.

Initial results have highlighted differences in uptake by vision centre, including variability in patient gender and the conditions that service users are presenting for. This has enabled the management team to take appropriate decisions to meet observed challenges, such as undertaking more outreach and awareness activities in areas of sparse uptake. Use of the GIS is thus helping to ensure that services are accessible and responsive to the needs of all population groups, and has also proved to be a useful tool for identifying centres in need of support to improve their capacity for effective monitoring.

A geo-enhanced HMIS allows health practitioners to provide more responsive services to the needs of particular locations within their catchment areas. They also allow managers to monitor geographically specific health and service performance issues with greater ease and efficiency.
Kerry Scott, Johns Hopkins School of Public Health, United States
Abstract ID: 1827

The opportunities and costs of participation: How power inequalities are mediated through village health committees in northern India

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Background: Participatory community health systems can enable marginalized groups to gain a greater say in decision-making and can increase a community’s sense of collective agency. However, the empowering potential of participatory processes is often limited by inequalities within communities and between communities and outside actors (i.e. government officials, policymakers). We examine how community participation in Village Health, Sanitation and Nutrition Committees (VHSNCs) can enable but also hinder the renegotiation of power relations that underline social inequalities in rural north India.

Methods: Over a 1.5-year period, we observed health committee activities, and conducted 74 interviews and 18 focus group discussions with VHSNC members, non-VHSNC community members, and higher-level health system functionaries. After initial thematic analysis, the data were interpreted through the psychosocial theoretical lens of “social spaces” to explore how power was mediated through these committees to produce social costs and opportunities.

Results: VHSNCs created some opportunities for participants to re-negotiate power inequalities within the community, particularly around gender, through inviting male and female co-occupation of space, enabling some women to speak in front of men, and creating space for women to perform previously masculine roles. In contrast to the progressive potential in gender relations, inequalities between the community and outside stakeholders were mediated by the health committee through an ongoing struggle around a “discourse of responsibility.” Government policy presented a dominant discourse portraying VHSNC members as responsible for village environmental health and for improving the delivery of public services. In following this discourse, some VHSNC members blamed their peers for failing to take action, constructing a negative collective identity where participation was futile because no one would work for the greater good. Others rejected the discourse and argued that the VHSNC was not alone responsible for taking action, explaining that government agents must also intervene to help them. This counter-narrative also positioned participation in the VHSNC as futile.

Conclusions: Interventions to strengthen community participation in health systems can support social transformation. However they must be more mindful of how performing progressive gender roles within the VHSNC can be sustained outside that social space, and also how discourse frames the rationale for the terms on which community participation takes place.
Elaine Scudder, Save the Children, United States
Abstract ID: 2807

Addressing gaps in routine systems and during emergencies: experience of the Newborn Health in Humanitarian Settings: Field Guide

Co-authors: Kate Kerber, Samira Sami, Ribka Amsalu, Save the Children; Johns Hopkins University

Background: Pregnant and newly delivered women and their newborns are particularly vulnerable groups in conflict and disaster-affected settings. Yet care around the time of birth is neglected in both existing humanitarian emergencies and routine systems in many low-resource settings. An inter-agency field guide for newborn health in humanitarian settings was developed to rapidly introduce newborn health training, supplies, and indicators in crisis situations with the intention of also strengthening routine systems and resilience before and after crises arise.

Methods: A short training curriculum for newborn care was developed and costed for facility and community health workers, complemented by a stock list specific for newborn care supplies at each level of care, in line with existing global guidelines. In addition, key indicators were identified to track data related to stillbirths, newborn deaths, and quality of service delivery. The field guide is being piloted in various settings amongst displaced populations.

Results: Preliminary results indicate that the quality of newborn care in health facilities that primarily serve refugee populations is higher than amongst internally displaced groups, as well as compared to services in host communities and government facilities. The quality of care at the time of birth is strongly linked to the strength of the health system to absorb shock. Partners must support integration with health and other ministries across the development and humanitarian continuum.

Discussion: In times of crisis, mothers must overcome immense obstacles to provide care and safety for their children, and particularly newborns, even while their own vulnerability to poverty, malnutrition, sexual violence, unplanned pregnancy and unassisted childbirth greatly increases. Humanitarian emergencies often exacerbate gaps in service provision between governments and relief organizations. The Newborn Health in Humanitarian Settings: Field Guide aligns with the Abu Dhabi Declaration, which urges the global community to ensure that processes, funding, and coordination are mainstreamed across the development and humanitarian continuum and include a strong focus on risk preparedness and community resilience. For maternal and newborn health to improve, there is a need to ensure knowledge transfer across the continuum so that health systems can be strengthened overall.
Katie Sears, Palladium, United States
Abstract ID: 788

**Toward Universal Health Coverage: Assessing stakeholder perceptions of the feasibility of health insurance in Afghanistan**

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Background: After more than a decade of re-building, Afghanistan is at a crossroads. The Transformation Decade (2015–24) envisions an increasingly self-reliant Afghanistan in economics, security, and social services, including health. Despite progress in expanding access to basic and essential services, the long-term resilience of the health system faces significant challenges. In terms of health financing, Afghanistan must devise strategies to alleviate high out-of-pocket payments and increase domestic resource mobilization in preparation of eventual donor phase-out. In this dynamic environment, health insurance is envisioned as a way to improve efficiency and sustainability of the health system and put Afghanistan on the path toward universal health coverage.

Methods: A qualitative study was carried out to assess stakeholder perceptions about health insurance feasibility and design in Afghanistan. The International Labor Office’s framework on microinsurance schemes was adapted for designing guidelines for key informant interviews (KIIIs) and focus group discussions (FGDs). In total, 51 participants took part in the study through 16 KIIIs with high-level officials and five FGDs with health sector providers and technical experts. Atlas.ti analysis software was used to conduct data analysis through an integrated content analysis approach. Researchers developed a codebook based on initial transcript reviews and interview guides and used a combination of line-by-line and sentence coding to bring out major themes and findings. The stakeholder analysis was part of a broader study that includes a literature review and legal assessment.

Results: Most stakeholders were aware of the challenges of the Afghan health financing system and acknowledged that health insurance could be an important instrument to address the country’s health financing challenges and improve the health system’s sustainability. However, stakeholders differed in their beliefs about how and when a health insurance scheme could be initiated. In addition to security concerns, they saw the lack of clear legal guidance, low quality of healthcare services, low awareness among the population about health insurance, and limited technical capacity and willingness to pay as major barriers to establishing a successful nationwide health insurance scheme—despite increasing demand for health insurance from some organizations in the formal sector and improved human resource capacity in the country.

Conclusions: In spite of stakeholders’ strong interest in health insurance, the legal, quality, and capacity barriers will prevent Afghanistan from establishing a health insurance scheme in the short term. Afghanistan needs to progressively address major barriers and take an incremental approach to building a health insurance system.
Saamia Shams, Marie Stopes Society, Pakistan

Abstract ID: 2684

Regulating private-sector through social franchising for the provision of quality family planning services in rural Pakistan: a process-monitoring mechanism of clinical quality assurance

Co-authors: Saamia Shams, Marie Stopes Society

Purpose / Background: Social franchising is emerging as an increasingly popular method of private sector health care delivery across developing countries. Despite the growth of this approach, relatively little is known about quality of care in this context. Private medical sector in Pakistan is currently providing 35% of total family planning (FP) services; yet, quality is well below standards. In 2012, Marie Stopes Society, established a social franchise network in the rural areas of Pakistan for the provision of quality and affordable family planning services.

Focus/Content: This study presents a process of clinical quality assurance of private-sector franchised providers to ensure provision of safe, reliable, and dignified care. Service Provider (SP) undergoes a comprehensive training on range of family planning services before joining the network. Quality is assured through regular visits by the Quality Assurance (QA) teams - complemented by annual quality technical assistance (QTA) offered by the experts at Marie Stopes International (MSI).

Significance to the sub-theme area and field-building dimension: The process monitoring mechanism of clinical quality assurance is based on the proactive de-centralized follow-up mechanism. QA monitor fills out QA checklist that comprises of over 350 indicators and are classified into eight domains: Clinical Governance, Technical Competence, Client focused care, counselling, Family planning, Infection prevention, Medical emergency management and supplies management. The QA scoring criteria is based on the color coding from Red, Amber and Green, depicting low to high scores. During the visit, monitor assists SP in achieving each of the aspect before leaving the health facility. This is duly recorded in the checklist whether or not the certain standard was: in place at beginning of visit, achieved by end of visit, or it was not achieved altogether. Performance enhancement is done by frequent follow-up visit after every 3 month to those providers who attain the score of 60%, till they achieve 90%. Failure to quality improvement leads to de-accreditation preceded by a 45 day notice.

Learning objectives: Results show mark improvement in clinical quality improvement. On an average franchise provider take up to 28 months to achieve the safe-zone benchmark of 80%. SPs tend to perform better on ‘clinical governance’ and ‘client-focused service provision’, followed by ‘supplies/procurement’. However, they struggle mostly on ‘competency/procedure assessment’ and ‘infection prevention’ There has been a gradual (3% to 4% increase in the quality score for all domains except for ‘FP counseling’ and ‘competency’, where the trend was inconsistent.
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Abstract ID: 1114

What are the Implementation Research Priorities for Canadian Investments in Maternal, Newborn, Child and Adolescent Health Globally?

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Background: Improving global maternal, newborn, child, and adolescent health (MNCAH) is a top development priority in Canada, as demonstrated by the $6.35 billion in pledges towards the Muskoka Initiative since 2010. We undertook an exercise to guide Canadian research investments by systematically establishing a set of research priorities on the implementation of MNCAH interventions in low- and middle-income countries.

Methods: We adopted the Child Health and Nutrition Research Initiative (CHNRI) method. We scanned the CHNRI literature and extracted research questions pertaining to the delivery of existing interventions, inviting Canadian experts with knowledge of MNCAH to generate additional questions. The experts systematically scored a combined list of 97 questions using five criteria: answerability, feasibility, deliverability, impact, and effect on equity. These questions were then ranked using a “Research Priority Score” (RPS) and the “Average Expert Agreement” (AEA) was calculated for every question.

Results: The overall RPS ranged from 40.14 to 89.25, with a median of 71.84. The AEA scores ranged from 0.51 to 0.82. Highly ranked research questions varied across the continuum of care and focused on improving detection and care-seeking for childhood illnesses, overcoming barriers to intervention uptake and delivery, effectively implementing human resources and mobile technology, and increasing health coverage among at-risk populations. Children were the most represented target population and most questions pertained to interventions delivered at household or community level.

Interpretation: The list of priorities is a valuable tool for guiding Canadian research investments that could have a high impact on MNCAH outcomes over the next fifteen years.
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Abstract ID: 148

Evaluating global health partnerships: a case study of the Gavi HPV vaccine application process in Uganda

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Background: Gavi, the Vaccine Alliance was an early adopter as a public-private partnership bringing together various partners to achieve its mission to save lives and protecting peoples health by increasing access to immunization in poor countries. Gavi commissioned a 4-year prospective evaluation in four countries with the aim of measuring vaccine coverage, documenting policy change including the effect of partnership on decision making, planning and implementation of Gavi support. This study outlines an approach to evaluating the effectiveness, efficiency, and legitimacy of global health partnerships specific to the process surrounding the Uganda’s application for Gavi funding for national introduction of the Human Papilloma virus vaccine (HPV).

Methods: In order to test the partnership framework in action, a mixed methods case study was embedded in an ongoing prospective evaluation of the process of new vaccine decision-making and implementation in Uganda. The HPV vaccine application process was chosen because of its timeliness and potential of applying lessons to HPV implementation and other vaccine introductions. Data collection included document review and in-depth interviews including a structured network survey with key informants at national level partners involved in the application process. Notes from the interviews were transcribed into the partnership framework and were coded by hand using pre-determined coding structures while the survey data was analyzed using UCINet.

Results/Conclusion: Seven key informant interviews were conducted and 11 networks surveys were administered to the national level partners involved in the HPV vaccine application process between August and October 2014. We found that partnership around HPV application was strong, and this was partly attributed to several contextual factors: past immunization partnership experiences, including that of the HPV demonstration project; the existence of champions; political priority around cervical cancer; and high levels of trust. Our analysis of the network data indicates that the network structure displayed structural attributes consistent with other partnerships including relative decentralization, moderate density in the network core, and high average levels of trust. However, network mapping also uncovered ‘missing’ actors, which may have led to premature decisions about whether HPV vaccine should be delivered through the health system or in schools. HPV vaccine application partnership was perceived to have been effective but inefficient and this is potentially related to the lack of accountability mechanisms, terms of reference or other guidelines related to partnership. There’s need for greater inclusion of existing diverse actors like the private sector and other ministries in future application processes.
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Abstract ID: 997

Does Doctor Quality Matter? A Study on the Effect of Provider Competency on Visits to Primary Health Centers in India

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Background: Improving access to health services in rural areas is a challenge to achieving universal health coverage in India. The main focus of government efforts has been on increasing physical access to services by building more health centers and improving structural quality. This input driven approach has ignored investing in provider quality, despite evidence indicating low quality of medical advice. This study examines the association between provider quality, structural quality, and the use of primary health centers for curative care in the state of Chhattisgarh, India.

Methods: This study was a cross-sectional study carried out in health facilities and households in Chhattisgarh, India. In the first phase of data collection, a random sample of Primary Health Centers (PHCs) was selected and data on provider competency was collected through clinical vignettes. In the second phase, households living in the vicinity of the PHCs were visited to collect information on health care seeking behavior. Of the 2,124 households surveyed, 1,688 households in which at least one individual had been sick in the last 30 days and had sought treatment are included in this analysis. The main outcome measure is the type of facility visited for the last illness (either the nearest PHC or other facility). Multiple logistic regression using a random effects model was used to estimate the relationship between provider competency and use of a local PHC, controlling for structural quality of the PHCs, socio-demographic characteristics of households, and location characteristics.

Results: Of the 1,688 households surveyed, 51% visited the local PHC for health care during their last illness. As provider competency increased at the local PHC, households were more likely to visit the local PHC for treatment of an illness (OR: 1.35, 95% CI: 1.02 – 1.78). Improvements in structural quality of facilities including PHC infrastructure (OR: 1.01, 95% CI: 0.92 – 1.11), PHC condition (OR: 1.11, 95% CI: 1.00 – 1.24), and medicine availability (OR: 1.03, 95% CI: 0.95 – 1.11) did not result in increased utilization of local PHCs.

Conclusion: The findings suggest that the quality of the health care provider is an important factor for households when deciding where to seek care. Importantly, measures of structural quality appear to have a smaller effect on use of local PHCs. This suggests that efforts at increasing uptake of health services should focus on improving quality, and not only on expanding access to facilities or investing in their structural quality.
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**Boundary-spanning: reflections on the practices of global health**

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Over the past decade, the international development and public health communities have witnessed the emergence of the terminology of Global Health. This now widely used term is a malleable metaphor that describes, enables and legitimates a wide variety of practices. Circulating definitions of global health are bound to vary, determined by where actors are positioned. Such definitions always involve power, whether material, epistemic or moral, in which the main intended beneficiaries of global health (citizens and communities, particularly those who are marginalized) and the implementers of global policies and programmes (country practitioners and managers at the frontlines in low and middle income countries (LMIC)) have remained relatively silent, or neglected.

As country level health policy and system researchers and actors based in LMIC health systems, we advance the argument that in order to become relevant for the goal of making LMIC health systems more resilient and responsive, debates on Global Health need to shift from definitional concerns to a focus on how it is practiced and how these practices span real world relationships and boundaries. We will use examples from our own experiences to draw what we believe to be lessons on “boundary-spanning” practices in global health. These experiences include our roles in pan-African field-building initiatives for Health Policy and Systems Research (CHEPSAA and CHESAI), and a national training and policy collaborative in India (KEYSTONE), and our engagements with an international membership organization and conference (Health Systems Global).

Some key strategies and enabling contexts that can facilitate more effective boundary-spanning practices in global health are as follows

- Fostering cross-country learning networks across LMICs, that cut across boundaries such as those of community/national level organization and creating global communities of practice
- Promotion of transparent and ethical practices that actively bridge and blur conventional boundaries of research, policy and field practice
- Creating new capacities in learning organizations of the global South - which are best placed to broker key dialogues with health system practitioners/planners and community level organizations – for the scholarly and political work needed to influence ideas and interests.

Current global movements – including the sustainable development goals and universal health coverage – represent progressive beacons for the international development community. Boundary-spanning, as a philosophy of practice in global health, can help orient the processes of implementation and institution-building that can make these goals a reality.
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Continuum of care interventions improved service seeking behaviors among women in maternal and newborn health in Ghana: a cluster randomized control trial

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Background: Saving lives from maternal and neonatal complications has been a critical public health agenda in developing countries. Many developing countries, however, were unable to achieve their Millennium Development Goal targets for mortality reductions. While the coverage of individual services, such as antenatal care (ANC) and skilled delivery, has been improved, continuum of care (CoC) for women and their newborns has not been achieved. This study aimed at evaluating the impact of the interventions that were intended to improve continuum of care among women and newborn in Ghana.

Methods: The cluster randomized controlled trial, introduced the following package of interventions in three health demographic surveillance sites in Ghana between October 2014 and December 2015: 1) continuum of care orientation for health workers, 2) distribution of continuum of care card to record the history of receiving maternal and newborn health services, 3) 24-hour retention at a health facility after delivery for postnatal care (PNC), and 4) home based postnatal care. In the study area, 32 sub-districts were divided into intervention and control arms. Overall, 1,500 women eligible for services, were randomly selected in a baseline and follow-up survey. An evaluation of the impact of the package on the completion of continuum of care was carried out. CoC completion was defined as receiving ANC four times or more, delivery attended by skilled birth attendant, and receiving three PNC services.

Results: The completion rate of continuum of care improved from 8% to 47% in the intervention arm and from 9% to 40% in the control arm. The introduction of the package of interventions was more likely to lead to an improvement in the completion of the CoC (Adjusted Odds Ratio [AOR] = 1.68, 95% Confidence Interval [CI] = 1.02 to 2.75). Other factors associated with improved CoC were completed higher secondary education (AOR = 1.75, 95% CI = 1.18 to 2.59), Muslim (AOR = 0.62, 95% CI: 0.46 to 0.84), cohabitating with partner (AOR = 0.71, 95% CI: 0.54 to 0.93), unintended pregnancy (AOR = 0.70, 95% CI: 0.56 to 0.88), and socio-economic status score (AOR = 1.23, 95% CI: 1.09 to 1.39).

Conclusion: The package of interventions in this study improved COC among women. A substantial improvement was also made in the control arm, with some uptake of the intervention by individuals living in those areas. This implies that the interventions could be replicable among health workers without extensive training and investment.
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Abstract ID: 2287

From bureaucratic to democratic health systems: Social innovation for state-wide change – Decade of Community monitoring and planning for responsive health services in Maharashtra, India

Co-authors: Abhay Shukla, SATHI

Community based monitoring and planning (CBMP) of health services in Maharashtra state is arguably the largest civil society-led initiative for Health system accountability in India today, supported by the public health system. This innovative framework for participatory governance and health services responsiveness is currently upscaling to 2500 villages spread across 19 districts of Maharashtra. In the decade since initiation in 2006, multiple phases have generated valuable lessons, latest being strategies for transition to a generalisable, sustainable model. This integrated framework of community-centred action research, participatory health systems development, and transforming community– health provider interface provides valuable lessons for health systems in low and middle income countries.

CBMP utilizes five complementary strategies for deepening democracy concerning Health systems: promoting direct democracy through public hearings and village health assemblies; reclaiming representative democracy by activating local elected representatives; expanding representative democracy through inclusive multi-stakeholder committees from village to state level; provoking health system internal accountability by providing critical information; and participatory interventions in decentralised health planning. Regular community data collection and social auditing of health facilities, with periodic display of health system report cards, supports the process. The National Health Mission supports CBMP through public funds, mandate and participation of health officials, with facilitation by the state network of nearly 50 civil society organisations.

Impacts of CBMP were assessed through indicators on quantitative changes in Health service delivery, qualitative changes in health service quality, improvement in utilization, and stories of change reflecting changed power relationships. Health service delivery in 40 Primary Health Centres covered by CBMP was compared with 40 PHCs in non-CBMP areas, matched for availability of doctors and infrastructure. Laboratory services, referral transport services and inpatient services were rated as ‘Good’ in 73%, 80% and 64% of CBMP PHCs, compared to 8%, 55% and 45% of non-CBMP PHCs, indicating major improvements in CBMP areas.

Key insights include: utility of mobile phone based technology for rapid collection and analysis of community data; categorisation of services into ‘CBMP sensitive’ and ‘CBMP resistant’ based on responsiveness to accountability; converting inactive formal spaces into vibrant democratic forums through community advocacy; linking multi-stakeholder processes across multiple levels to ensure action; promoting community monitoring on social determinants of health, leading to sustained social activation; and emergence of ‘federations’ of health committees as a sustainable driver of change.
CBMP in Maharashtra provides rich lessons on significant scale, to inform processes for health system responsiveness in India and beyond.
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Abstract ID: 2226

From individual to team and system competencies: extending the boundaries of health leadership and management capacity development

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ABSTRACT: Strong leadership and management (L&M) capacities are essential in well-functioning health systems. Worldwide, countries are exploring new ways of developing health leadership capacity.

The Western Cape Provincial Department of Health, South Africa (WCDoH), identified leadership development as a central element within its recent strategic plan. The plan aspires to develop a resilient, people-centred health system, powered by competent leaders located system-wide. Recognising the need for a purposeful and coordinated leadership strategy, the WCDoH forged a partnership for health leadership and management capacity development (PAHLM) with three Higher Education Institutions.

The first task of the PAHLM was to develop a leadership competency framework (LCF) to guide the strategy development. This presentation outlines the LCF’s development and discusses its implications.

PAHLM employed both deductive and inductive methods to develop the LCF: combining expert opinion and an analysis of relevant, international literature, with experiential insights and perspectives from WCDoH managers.

Data collection included: interviews with human resource (HR) managers to understand current HR and leadership and management development processes; iterative engagements with 45 managers from three (urban and rural) case study districts, involving interviews, focus group discussions and workshops. These engagements yielded insights into: necessary individual and team competencies; competency gaps; training experiences and needs; and system requirements to support leadership. Finally the draft LCF was further developed through workshops involving more than 600 additional managers, in collaboration with a consultant agency engaged in complementary work.

The refined LCF was reviewed and validated by WCDoH senior managers. It combines 9 individual- and 8 team competencies with 5 system capabilities. Individual and team competencies comprehensively address cognitive, functional, social and meta-competencies. In contrast to the current focus on individuals, this LCF recognizes that the team as a collective unit is central to implementing the health system vision of the WCDoH. The inclusion of system capabilities acknowledges that leadership development requires supportive, system-wide change.

The LCF’s implications for leadership capacity development include: combining suites of formal training and more informal workplace-based interventions; recruiting teams, not only individuals; prioritising L&M in WCDoH capacity development activities; adapting HR management and development processes to support team- and personal career development; and providing enabling learning environments in a supportive system where risking new ideas and practices will be encouraged and supported.
The three-dimensional (individual-team-system) LCF developed through PAHLM, and the process of its development offer lessons of national and international relevance.
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Abstract ID: 1266

**Introducing doctors into primary healthcare clinics: the realities of complex interventions in South Africa**

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**Background:** South Africa is engaged in major health care reform initiatives towards attaining universal health coverage (UHC), through a so-called National Health Insurance (NHI). Phase one of preparing for NHI implementation involved strengthening of primary health care (PHC) services, starting in ten ‘NHI’ pilot districts. One of the multiple innovations introduced was the contracting of private general practitioners (GPs) to work in nurse-led public sector clinics. This innovation aimed to bolster clinic capacity and address current inequities in doctor distribution between the public and private sectors. This paper explores how efforts to draw private doctors into public clinics evolved in three NHI pilot sites and presents the lessons for scaling up from this innovation.

**Methods:** Using a theory of change and a multiple case study design two phases of data collection, between 2013 and 2015, aimed at exploring the implementation progress of innovations, were conducted by the Universal Coverage in Tanzania and South Africa (UNITAS) project team in three NHI pilot districts. Data on this innovation were extracted from 254 in-depth interviews conducted with district-, sub/district- and facility managers, and frontline health workers across 41 facilities.

**Key findings:** Efforts to better equip clinics for doctors positively improved infrastructure and equipment and thus benefited overall clinic capacity. The number of GPs contracted varied across sites and the innovation mostly did not evolve as expected. A number of models of getting doctors in clinics, contrary to the original intention of redistributing private general practitioners’ time and skills to public sector clinics, were identified. A predominant new arrangement is that of attracting doctors from other positions in the public sector to work, under lucrative contracts, in public sector clinics, potentially having unintended consequences for staffing of public sector hospitals. For clinics where doctors are present, the impact on patient care, referral patterns and on-site support to nurses, including in-serve training, is indisputable. However, many issues require consideration before scaling-up, including the sustainability and longer-term management of doctors in traditionally nurse-led clinics. Potentially negative unintended consequences for the public health sector must be carefully monitored.

**Conclusion:** Increasing the availability of doctors in public sector clinics, particularly in rural areas, has undoubted benefits for patients and nurses in clinics, both in terms of patient care and overall clinic functioning. However, sustainability and potential negative unintended consequences require careful consideration in longer-term scaling up efforts.
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Abstract ID: 982

**The Transfer of the Performance Purchasing Role from International Actors to National Organizations: Lessons from the Cameroon PBF Program**

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**Background:** In February 2011, the World Bank and the Government of Cameroon started a Performance-Based Financing (PBF) program in four regions of the country. In order to ensure its rapid implementation, the performance purchasing role was subcontracted to an international consultancy firm and an NGO. However, since the early stage, it was agreed upon that a Cameroonian regional entity (the Regional Funds for Health Promotion) would take over this role so as to ensure the scaling up at the sustainable cost for the country. Our research aims to analyze the process of transfer of the PPA role from the international organizations to the national organization.

**Methods:** The study design is an explanatory case study. We used two concurrent data collection methods: a document review and in-depth interviews with key informants (KI). KI were selected using purposive sampling, with the main criterion being their knowledge of the program. The selected respondents (n=33) included various types of actors involved in the transfer process. All interviews were recorded, transcribed and analyzed using a qualitative data analysis software (QDA miner Lite). We performed thematic analysis and extracted emerging themes from the data. An adaptation of Dolowitz and Marsh's framework on policy transfer was useful to guide our analysis.

**Results:** The management of the transition process required a very high level investment of efforts and time from various stakeholders, necessitating repeated meetings between the staff of the international and the national organizations. However, the efforts to collaborate during the transition were limited to the incoming and outgoing PPA actors. They paid little attention to other stakeholders such as implementers at the peripheral level. While respondents provided numerous justifications to conduct the transition, the process appeared somehow difficult in two regions, to the point that several actors, especially those at the operational level, had mitigated opinions regarding the transfer process. The lack of immediate gains seems to have been a significant obstacle to the whole transition program, but could also have contributed to better preparation of this process in the third region.

**Conclusion:** The experience in Cameroon suggests that key components for a successful transfer may include: clear policy guidelines, an extended and sequenced timeframe for transition, a co-ownership and planning of transition by all parties, a detailed transition planning, an engagement of staff in the transition process, and the development of a post-transition support phase.
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Abstract ID: 292

Beyond the branding: the 'hard graft' of introducing and sustaining innovation in primary care and health systems.

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Background: The mismatch between level of investment and health outcomes and the health reforms in the United States of America (USA) generated interest in learning from approaches to primary care (PC) in other high and middle income countries (HMICs) that have achieved improved health outcomes at lower levels of health expenditure. In 2014 the Training and Research Support Centre (TARSC) implemented a project to identify and describe promising PC approaches in HMICs to inform dialogue on PC reforms in the USA. Adapting innovation across countries calls for a deeper understanding of the contexts for and factors affecting the implementation of these practices.

Methods: The paper draws on selected sources of evidence from the project, namely, a desk-based review of promising PC practice in several HMICs, 4 case studies (Canada, Chile, the Netherlands, and UK) developed by the country teams and an international policy dialogue. In this paper we present, with specific examples, the findings on the factors that support the introduction, adaptation or sustaining of innovation in PC as part of wider health systems change.

Results: Political and policy determinants that provide leadership and support for new practice at central and local level proved to be key to introducing change, especially when backed by funds and incentives for innovation. Different types of evidence generated and shared among all stakeholders support local innovation, including: evidence on contexts, problems and ideas, and applied evidence from demonstration models of innovation and/or promising practices. Specific forms of evidence, such as evaluations, are used both to win public, professional and funder support and to overcome powerful interest-group barriers. Beyond incentives, training, competencies and responsibilities also play a role in encouraging, delivering and sustaining change. HMIC experience also indicates the need for transactional skills and meso-level institutions to negotiate inputs, and measures to: communicate, reflect, analyse and share learning from action; to manage conflict; and to encourage improvement and review, particularly to align judgements on the timing within which benefits can realistically be achieved.

Discussion: Within the rhetoric of innovation, the evidence about what is required to introduce and sustain improvement in all settings may seem mundane and may be ignored. The evidence on how countries have introduced and sustained PC innovation point to the specific areas of learning, strategic leadership and the 'hard graft' needed to move beyond innovation per se to achieving sustained improvement.
Reforming Nursing Sector: Lessons from Five Indian States

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Purpose: Understanding the social construction of target groups of the policies has implications on policy agenda setting and implementation. This paper is based on our experience of review carried out by National Health Systems Resource Centre on recent nursing reforms in selected Indian states. Nursing reforms are inevitable part of the efforts make health systems more responsive and resilient in developing countries. The paper tries to deliberate on the reasons for certain nursing reforms being prioritized for implementation over others. The reflection is based on analysis of state-level policies and its implementation and discussion with 146 key stakeholders and informants of nursing reforms in five Indian states.

Content: The shortage of nurses and inadequacies in their capacities were identified as issues that needed immediate policy attention. The reforms in the nursing sector evolved over a period of time and involved interplay of factors. A crucial contextual factor is the general perception of compromised social and professional status of nurses as compared to the medical and other health professionals. The policies have varying degree of success in its implementation. In states like Kerala and West Bengal where nurses are better organized, they are able to negotiate and advance reforms that consolidate their professional identity. In other states, most of the initiatives for reforming nursing profession are in early stage of implementation. Successfully implemented includes strengthening of pre-service training of nursing training institutes. Policy reforms such as those enacted for establishing a separate nursing directorate and revising nursing service rules are lagging behind.

Significance for sub-theme: It has been observed that even after years of neglect, nursing in few states was elevated in policy agenda by collective and collaborative efforts of stakeholders and political willingness, which provided a window of opportunity. It was interesting to note that while the reforms were advanced with the support and persistent efforts of external expert agencies, the core target group of these reforms, the nurses themselves played a rather subdued role, especially in states where they have relatively disempowered social and professional status.

Using Schneider and Ingram’s theory of target populations of policy we reflect our observations and explain how nurses were seen as dependents and contenders in different policy contexts. For those policies where nurses are seen as contenders, it is important for the nurses to organize themselves systematically and collectively to challenge the current climate of relative disempowerment the profession finds itself in.
Health Systems Determinants of Growing Pharmaceutical Use Among Brazilian Elderly

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Background: Growing use of pharmaceuticals is a global phenomenon, especially among the elderly. This is a public health concern because of the increased risk of drug-related problems such as adverse effects and drug interactions, which may increase morbidity and mortality. Brazil is the world's sixth largest pharmaceutical market and has a rapidly growing older population that is progressively taking more medicines, including polypharmacy (using five or more pharmaceuticals a day). Because polypharmacy may be associated with greater costs without corresponding gains in health status, understanding its main drivers is important to devise strategies to reduce its use. This is especially relevant in the Brazilian context where demand is high and resources are limited.

Aims: To investigate trends in use of pharmaceuticals among community-dwelling older adults in São Paulo, Brazil, identifying individual and health system factors associated with polypharmacy.

Method: We identified individuals with polypharmacy using data from a representative sample of community residents aged 60 years and older in the city of Sao Paulo, Brazil. The sample, composed of 2,143 individuals, was followed periodically between 2000 and 2010. We combined the sample data on patient characteristics such as age, gender, and chronic diseases with health system information from official public sources to run multilevel analytical models.

Results: The use of polypharmacy almost doubled in the 10-year interval, from 22% to 42%. Use of pharmaceuticals was higher among women and older individuals. Among the factors that helped explain the growing number of pharmaceuticals, some operated at the individual level, such as the growing percentage of people with multiple chronic conditions. Health system's characteristics, including health care access and integration, contributed to explaining the variability in the use of polypharmacy in addition to individual factors.

Conclusion: Both individual and health system factors are responsible for the growing use of pharmaceuticals among Brazilian elderly. Characteristics such as accessibility and integration of services should be further explored as potential policy targets to improve elderly care and increase efficiency in the use of resources.
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Abstract ID: 1225

Apprécier les conceptions de la performance d’un système de santé de district pour élaborer un cadre d’évaluation consensuel.

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Introduction : L’élaboration des critères d’évaluation de la performance d’un système de santé de district doit prendre en compte les perspectives de tous les acteurs. Ainsi, l’importance de cette recherche réside dans le fait qu’elle permettra de disposer des perceptions des principaux acteurs du district sur la performance d’un système de santé de district.

Objectifs: Cette recherche vise à identifier les dimensions de la performance d’un système de santé de district selon les perspectives des principaux acteurs.

Méthodes: La recherche s’est déroulée dans dix districts sanitaires repartis dans deux régions sanitaires. Les données ont été collectées auprès des infirmiers chefs de poste (ICP) qui sont les premiers responsables des centres de santé, les membres de l’équipe cadre du district et de la direction régionale de santé (structures décentralisées du ministère de la santé) et les responsables d’associations qui interviennent dans le district, les membres des comités de gestion des centres de santé (CSPS) et enfin les agents de santé communautaires (ASC). Trois méthodes ont été utilisées à savoir les entretiens semi-directifs, les focus group et les ateliers délibératifs. Les thèmes abordés ont porté sur les difficultés de fonctionnement du district, les problèmes de santé de la population locale, les difficultés d’accès aux soins et les dimensions de la performance.


Discussion et conclusions: Cette recherche montre une divergence de vue entre les principaux acteurs sur la performance du système de santé de district et amène à poser une question fondamentale. Comment faire pour prendre en compte ces différentes conceptions dans l’élaboration d’un cadre d’évaluation de la performance d’un système de santé de district ?
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Abstract ID: 1165

An inquiry into global efforts to sustain capacity development for evidence-informed health policymaking in low- and middle-income countries: Liberia case study

Co-authors: Kayla Song, Taghreed Adam, Justin Parkhurst, Institute of Health Policy, Management and Evaluation, University of Toronto; World Health Organization; London School of Hygiene and Tropical Medicine

Background: Development experts have argued that the value of aid is highly contingent on the extent to which national decision-making process presided. In recent years, deliberate efforts to strengthen the stewardship of the local government in decision-making process, through capacity development in evidence uptake in policymaking process, have received increased attention. However, sustainability of these programs has been gradually recognized to be weak, and the interests in understanding the role of enabling environment and institutional structures have been growing. In a fragile state, common problems and challenges facing LMICs are not only exacerbated but are compounded by its unique challenges, arising from armed conflict, political instability, environmental crisis or economic collapse. In spite of their relevance and importance in the issue of global aid effectiveness and development policy, the implications in fragile states have been under-documented.

Objective: The overall goal of the study is to investigate how political contexts influence key sustainability factors for supporting capacity development for evidence-informed health policymaking in LMICs, by incorporating evidence from post-conflict Liberia as a case study.

Methods: The study employs a stepwise approach. First, a literature review was conducted to identify key elements to sustain capacity development for evidence-informed health policymaking in LMICs. Second, post-conflict Liberia was chosen as a case study to investigate how the key elements for sustaining capacity developments identified in step one have been addressed in the context of a post-conflict fragile state. Lastly, the Liverani et al framework was applied to allow interpretations of the findings from the case study from a political lens, namely through post-conflict Liberia’s political system, institutional mechanism, and politicized nature of health issues.

Results: The key elements required to sustain capacity development for evidence-informed health policymaking were identified as institutionalization, human resources, and financing. Liberia Ministry of Health and Social Welfare acts as a central hub of evidence production and uptake in health policymaking process, including the retention of adequate staff for information system development as one of the core objectives. Changes in national financing mechanisms have influenced the process of health systems reconstruction in which the institutionalization of evidence use in health policymaking was established.

Discussion/Conclusion: The case study shows that sustainable institutionalization of research production and uptake for health policymaking necessitates constant maturity and improvement in response to the
changing political and institutional contexts, while emphasizing the importance of strengthened national stewardship at the center of decision-making.
Marcia Soumokil, Research Triangle Institute International - Kinerja USAID, Indonesia
Abstract ID: 2397

Turning evidence into policy: A Case Study from Papua Indonesia in Addressing Health Workers Attendance Following an Absenteeism Study

Co-authors: Marcia Angeline Soumokil, Jeff Sine, Elke Rapp, Julia Christine Sagala, Research Triangle Institute International - Kinerja USAID; Research Triangle Institute International; Research Triangle Institute International - Kineraj USAID

Purpose: Many local governments in developing countries continue to produce health policies with no supporting evidence. Issues such as a lack of quality evidence combined with limited capacity among policymakers to translate evidence into policy can hamper health-sector reforms in resource-constrained settings. In 2014, USAID-Kinerja conducted a health workers absenteeism study in four districts in Papua, the least-developed provinces in Indonesia, covering 768 health workers at 50 health centers. The results showed variations among districts, ranging from 14% – 49%. The study also found that the underlying causes of absenteeism differed in each district, and it strongly suggested that remedial action should be considered on a district-by-district basis. Following up on the study’s results, activities were conducted to support policies formulation at district level.

Content: The initial step for local policy formulation was an operational policy barriers workshop with key decision makers from all four districts, to reach agreement on the causes of health workers absenteeism and identify corrective action to lead to improved local policies. The workshop considered political, managerial and financial feasibility and the impact of proposed operational policies. The second step comprised discussions with district-level policy makers and civil society representatives to continue discussion on policy formulation at local level. These were translated into concrete actions, whose execution was supported by the project.

Significance: In evidence-based policy formulation, it is important to support local policymakers to determine policy options and select the preferred policies. Interestingly, decision makers were not surprised by the findings of health workers absenteeism study. The findings and follow up discussions increased their readiness to discuss the recommendations and take action. Each district identified different factors behind health workers’ absenteeism relevant to their areas, but a few common factors emerged: The level of job satisfaction among health workers; performance of health center heads, and frequency of supervision by district officials.

Sixteen policy options were developed during the initial workshop, including establishing integrated supervisory teams at DHOs, recruiting health center heads through fit and proper tests and introducing incentive schemes. Thereafter, three districts showed greater commitment to implement the policies and were given further technical assistance.
Research should be followed up with tailored technical support to secure concrete action on policy reform, especially concerning issues that vary between districts. All relevant stakeholders should be involved in determining solutions, to promote ownership and a readiness to act.

Target Audience: researcher, program manager, policymakers
Veena Sriram, Johns Hopkins Bloomberg School of Public Health, United States
Abstract ID: 3034

The 10 Best Resources on Power in Health Policy and Systems

Co-authors: Veena Sriram, Kerry Scott, Stephanie Topp, Arima Mishra, Rajasulochana Subramaniaraju, Walter Flores, Johns Hopkins Bloomberg School of Public Health; James Cook University; Azim Premji University; Mailman School of Public Health, Columbia University; T.A. Pai Management Institute; Centro de Estudios para la Equidad y Gobernanza en Sistemas de Salud

Purpose: Issues of power lie at the heart of health policy and systems (HPS). Power permeates every action and decision taken within the health sector, from efforts to empower marginalized communities, to examining power dynamics in policy development. Critically exploring power in HPS is therefore vital to developing equitable health systems. Engaging with the concept of power, however, is challenging: it is a diffuse, expansive concept, and is understood differently by different actors. Moreover, funders, researchers, and other actors may be reluctant to engage in what might be interpreted as political advocacy. For these reasons, explicit discussions of power are often missing in research, policies, and program development in health systems. At the same time, power is increasingly invoked in research and programming, but such discussions tend to remain superficial, leaving stakeholders unable to actively navigate these issues.

A diverse literature on power exists across multiple disciplines, presenting HPS researchers and practitioners a variety of ideas, frameworks and examples. However, the breadth of resources and tools can be overwhelming. This abstract is an attempt to identify 10 of the best resources on power within HPS to serve as a starting point for HPS researchers and practitioners who want to engage with issues of power.

Focus/Content: As members of the “Power in Health Systems” cluster within Health Systems Global’s Social Science Approaches for Research and Engagement in HPS (SHaPeS) thematic working group, we began in April 2015 to compile and assess existing literature on power in HPS. We solicited suggestions from the virtual SHaPeS network through the listserv of over 350 members for publications showcasing exceptional work on power and added additional resources from other networks. Twenty-four resources were included in the initial list and assessed by at least two co-authors for strengths, weaknesses and contribution to the field. Through a series of group discussions, 13 articles were shortlisted in the following categories: conceptual, methodological and empirical. We plan to present this shortlist in Vancouver to generate discussion among a wider group of peers and validate our final selection of 10.

Significance: These resources are meant to motivate further engagement around power and politics, a subtheme of HSR 2016. Our participatory process for identifying resources is an example of a virtual, international collaboration, and contributes to the field-building objective of ‘learning communities and knowledge translation’.

Target audience: HSG researchers and practitioners engaging with issues of power in health systems.
Rosalind Steege, Liverpool School of Tropical Medicine, United Kingdom  
Abstract ID: 1399

Policy and discourse on community health workers: A gender and equity analysis

Co-authors: Rosalind Steege, Miriam Taegtmeyer, Daniel G. Datiko, Ireen Namakhoma, Kate Hawkins, Korrie de Koning, Lilian Otiso, Maryse Kok, Mohsin Sidat, Rukshana Ahmed, Sabina Rashid, Sally Theobald, Liverpool School of Tropical Medicine

Background: Community health workers (CHWs) have a unique interface role linking communities and the formal health system. As such, they have been identified as a key cadre to advance universal health coverage, and in particular provide health care to vulnerable and marginalised populations. A growing body of evidence has highlighted how gender roles and relations shape both the opportunities and challenges CHWs face in realising their unique role. This study aims to understand from a global perspective the current discourse around CHW policy and gender and, to what extent national CHW policies and guidelines address gender.

Methods: This study is comprised of 2 parts. The first analyses national human resources and CHW policy documents from 6 contexts that are part of the REACHOUT consortium (Malawi, Mozambique, Kenya, Ethiopia, Bangladesh, Indonesia) using the Pan American Health Organisation’s ‘Guide for analysis and monitoring of gender equity in health policies’ to assess the extent to which gender is addressed in current policy documents. The second part adopts a qualitative approach; individual in depth interviews are used to explore current discourse around gender and CHW policy and policy development from the perspective of policy actors, makers and key informants. Data is being analysed inductively via thematic analysis.

Results: This study is at an early stage but initial interim analysis reveals that although policy actors are increasingly recognising the need for gender-responsive policy in the CHW agenda, national policy documents rarely mention gender in the context of CHWs. In some contexts, policy dictates that all CHWs are female (e.g. Ethiopia), whereas in others CHWs are both women and men, although men are more likely to hold senior positions (e.g. Malawi). CHWs come from the communities they serve and both understand and are shaped by gender power dynamics. However, in national policy documents that do cite gender responsive policies very little, or no, detail is given on how the policies are gender responsive and indicators for monitoring and evaluation of these policies are often missing.

Conclusion: To date, there has been minimal attention paid to the gendered experiences and needs of CHWs from a health systems policy perspective. National CHW policies and
guidelines need to include a gender perspective to support CHWs to build on their embedded and interface role linking the formal health system and communities to enable more sustainable, equitable and gender responsive health systems.
Improving the organisation of health systems for young Australian Indigenous children

Co-authors: Natalie A Strobel, Kimberley McAuley, Dan McAullay, Veronica Matthews, Ross Bailie, Karen Edmond, The University of Western Australia; Menzies School of Health Research

Background: Primary health care organisations need to continuously reform to more effectively address current health challenges, particularly for vulnerable populations. There is growing evidence that organised systems of care are essential for producing positive outcomes.

The One21seventy program is a continuous quality improvement program for Indigenous child health in Australia. The program includes a Systems Assessment Tool (SAT) which has been developed to enable Indigenous primary care centres determine how the functioning of their health system might be improved.

The primary objective of this study was to determine whether the quality of care for important childhood health and social issues (social and emotional wellbeing, neurodevelopment and anaemia) was influenced by organisational structures within different primary care settings.

Methods: This was a cross sectional study of 1554 SAT audits from 74 remote, rural and urban primary care centres across four Australian states and territories from 2012-2014. The SAT includes items that measure delivery systems, information systems, decision support, community integration and organisational integration. Scores from 0 to 11 were grouped to reflect limited (0-5) or well (6-11) developed organisational structures.

Only primary care centres that provided routine social and emotional wellbeing, neurodevelopment and childhood anaemia services were included. Composite quality of care outcome measures were developed for social and emotional wellbeing (n=1405), neurodevelopment (n=873), and anaemia (n=1390) in children aged 3-59 months. Data were analysed using crude and adjusted logistic generalised estimating equations (GEE).

Results: Thirty two (449) percent of children received care for social and emotional wellbeing, 49.3% (430) received neurodevelopmental care and 56.5% (786) received anaemia care. Children who attended services that had well developed information systems (60.5%, 529) were more likely to receive anaemia care compared to children who attended services that had limited organisational structures (50.0%, 257) (aOR 2.0, 95% CI 1.00-3.93). Information systems from well developed services (35.0%, 312) also resulted in improved social and emotional wellbeing care for children compared to services that had limited organisational structures (26.7%, 137) (aOR 1.9, 95% CI 1.12-3.01).

Neurodevelopmental care was not influenced by organisational structures.

Discussion: Our data indicate that well developed organisational structures, particularly information systems, can influence quality of care. Health services with these structures appear to be prioritising anaemia, and social and emotional wellbeing care in Indigenous children under 5 years. More emphasis needs to be placed on organisational structures that support neurodevelopment services and to improve these outcomes for Indigenous children.
Min Su, Xi’an Jiaotong University, China  
Abstract ID: 2136

The effects of China’s basic medical insurance schemes on the equity of health-related quality of life: using the method of coarsened exact matching

Co-authors: Min Su, Zhongliang Zhou, Zhi Ying Zhou, Qin Xiang Xue, Xi’an Jiaotong University

Background: Health equity has long been considered as an essential goal pursued by health systems. The evidence from previous researches suggest that medical insurance could reduce health inequity. China has launched three basic health insurance schemes: Urban Employee Basic Medical Insurance (UEBMI), Urban Resident Basic Medical Insurance (URBMI) and New Rural Cooperative Medical Scheme (NRCMS). However, few researches were available to compare the effects of different medical insurance schemes on the equity of health-related quality of life (HRQoL). This study aims to compare the equity of HRQoL of the insured residents with different medical insurances: between UEBMI and URBMI, UEBMI and NRCMS, and URBMI and NRCMS respectively.

Methods: The data were derived from the fifth National Health Services Survey of Shaanxi Province. The coarsened exact matching method was employed to guarantee the balance of empirical distributions of the confounding influences during comparing the health equity of different health insurances. The final matched sample consists of 5,998 respondents in UEBMI and URBMI, 29,233 respondents in UEBMI and NRCMS and 32,383 respondents in URBMI and NRCMS. HRQoL was measured by EQ-5D-3L utility value based on the Chinese-specific tariff. Meanwhile, the concentration index was adopted to assess the health inequity and it was further decomposed into its contributing factors.

Results: Based on the coarsened exact matching method, results showed that the mean EQ-5D utility score were 0.9607 and 0.9503 in UEBMI and URBMI, 0.9579 and 0.9520 in UEBMI and NRCMS, and 0.9553 and 0.9495 in URBMI and NRCMS respectively. Furthermore, the horizontal inequity indexes of EQ-5D utility score were 0.0025 and 0.0039 in UEBMI and URBMI, 0.0021 and 0.0046 in UEBMI and NRCMS, and 0.0022 and 0.0045 in URBMI and NRCMS respectively. All these results indicated that compared with the UEBMI, the insured residents of URBMI and NRCMS had worse health equity, and the health of the insured of NRCMS was the worst. Meanwhile, the horizontal inequity indexes were mainly explained by economic and educational statuses.

Conclusions: The basic medical insurance has limited effect on decreasing the health inequity, especially the NRCMS in rural areas. Therefore, our results highlight the need for policies to improve the compensation plan and benefit package of NRCMS to catch up with the urban medical insurances. And on this basis, three basic health insurance schemes should be integrated in their management system, financing level and benefit package. Moreover, the urban-rural health insurance scheme is suggested to be established.
Rapeepong Suphanchaimat, International Health Policy Programme, Ministry of Public Health, Nonthaburi, Thailand, Thailand
Abstract ID: 3027

Migrants and migrant health: the unsolved challenges of complex incoherent government policies in Thailand

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Background: Of the 65 million residents in Thailand, over 3 million are non-Thai population, where the majority is a group of illegal immigrants from neighbouring countries. Despite several policies launched to improve access to care among the migrant in the past, policy implementations face several challenges. This study aimed to gain better understanding on the policy context surrounding migrant and access to care by them.

Methods: The study used qualitative approach, including document review of all related laws, regulations and policies in the past 20 years the Immigrant Act. Twenty key informants (7 policy-level officials and 13 local health staff) were in-depth interviewed. The respondents were drawn from purposive sampling. Data were analysed by thematic analysis.

Results: Three critical themes were identified, namely, national security, economic necessity, and health protection. The evolution of migrant policies in Thailand can be divided into 4 phases. The first phase started in early 1900s to 1980s when the country attempted to defend the colonialism threats and the communism dogma. Several Acts legislated at that time are still enforced today, including the denial of jus soli principle over a migrant child. The second phase was between 1990s and early 2000s where the country demanded a sheer size of migrant labour force to maintain its growing economic activities. The third phase lied between 2004 and 2013, where the health sector gained more dominant role in migrant policies due to a government response to international pressures on Thailand of its mismanagement in human trafficking. The public insurance for migrant workers was introduced and then expanded to cover their dependants, undocumented persons, and stateless population. The final phase began in 2014 during the current junta era, where policies related to national security bounced back, with the prime focus on registering all of the migrant workers and providing health coverage to them. Thus, the vulnerable groups not covered by the registration gained less attention, and supporting policies to address health of the vulnerable were not strengthened.

Discussion/conclusion: The root causes of unresolved problems on migrant health are incoherent policy directions and objectives across government departments at the agenda setting stage, the policy volatility inevitably led to substantial confusions in policy implementation. Unclear policy message and lack of effective intersectoral coordination are the major bottlenecks. Besides, the health sector was de facto powerless and could not keep pace with the population dynamics due to its obsolete bureaucracy.
Boubacar SYLLA, POSSaV (Plateforme des Organisations de la Société civile pour le Soutien à la Santé et la Vaccination, Guinea
Abstract ID: 1755

Oui à la vaccination malgré Ebola

Co-authors: Boubacar SYLLA, POSSaV (Plateforme des Organisations de la Société civile pour le Soutien à la Santé et la Vaccination

Contexte: En Guinée, à cause de l’épidémie d’Ebola, les populations craignent de se rendre dans les structures sanitaires et se refusent à participer à toute activité de vaccination de peur de se voir « inoculer le virus Ebola ». L’on assiste donc au retour de certaines maladies évitables par la vaccination notamment la rougeole, la méningite et la poliomyélite.

Faire face à cette situation et contribuer à la résilience du système de santé Guinéen requièrent une synergie d’action de plusieurs acteurs notamment les communautés, le gouvernement et la société civile. C’est dans ce cadre que la plateforme de la société civile pour la vaccination (POSSAV) en collaboration avec le Programme Elargi de Vaccination (PEV) œuvre à rétablir la confiance des populations et améliorer la couverture vaccinale. La POSSAV depuis Janvier 2015 organise des causeries éducatives, émissions radiophoniques et sketchs touchant au moins 3103 ménages et promouvant l’acceptation de la vaccination ; plus de 9 307 enfants et 1552 femmes enceintes sont vaccinés à Faranah et N’Zérékoré.

Cette réussite découle de la collaboration avec et le Ministère de la santé qui nomme la POSSAV vice-présidente du comité de suivi pour la mise en œuvre du plan de relance du PEV facilitant la gestion par la plateforme, des activités de mobilisation sociale en faveur de la vaccination. De plus la collaboration avec les leaders religieux et communautaires a contribué à lutter contre le rejet de la vaccination par les communautés. A travers un partage d’expériences et de leçons apprises, cette étude veut attirer l’attention sur le potentiel de la collaboration entre le gouvernement et la société civile dans l’atteinte d’une plus grande résilience des systèmes de santé.

Méthode: Notre étude s’infore des rapports sur les résultats des campagnes de sensibilisation visant à rétablir la confiance des populations et améliorer la couverture vaccinale et sur la documentation disponible dans les structures sanitaires.

Résultats: L’organisation de 6 conférences de presse, de 45 campagnes médiatiques et de 146 causeries éducatives ont permis d’augmenter le taux de vaccination de 30% lors des premiers tours de vaccination contre la méningite et la poliomyélite, à 95 % aux tours suivants.

Conclusion: Ce projet répond à une spécificité qui porte sur une urgence sanitaire créée par le contexte EBOLA ; la collaboration entre les structures étatiques et la société civile est une bonne alternative pouvant contribuer à une plus grande résilience du système de santé.
Abstracts

Miriam Taegtmeyer, Liverpool School of Tropical Medicine, Netherlands
Abstract ID: 1675

**Working in effective partnerships – insights into performance of community health systems**

Co-authors: Maryse C Kok, Miriam Taegtmeyer, Jacqueline EW Broerse, Marjolein Dieleman, Sally Theobald, Royal Tropical Institute; Liverpool School of Tropical Medicine; VU University

**Purpose:** Resilient and responsive health systems need primary health care teams that work in partnership with communities. We combine systematically derived evidence from the literature with research outcomes and experiences from the 5-year REACHOUT consortium, to analyse how partnerships at the primary health care level could be strengthened to improve the performance of community health systems.

**Focus and content:** Health systems are social institutions, in which performance is determined by transactional processes between different actors. We argue that relationships between communities and the primary health care level need to be strong in order to build effective partnerships that can contribute to resilient and responsive health systems. The discussion focuses on performance of community health workers (CHWs), in the light of their unique intermediary position between communities and actors in the health sector, such as supervisors, nursing and clinical staff and management.

We present a framework on performance of community health systems, in which the factors that influence performance of CHWs and community health systems are analysed. These factors relate to the programme design, health system and broader context. At both the programme and system level, influencing factors are divided into “hardware” and “software”. Hardware elements, such as supervision systems and accountability and communication structures, continuously influence software elements: the ideas and interest, relationships and power, values and norms of the actors involved. This influence also exists the other way around.

The framework touches upon some interesting considerations for policy, practice and research. The realization that hardware and software elements are both needed and meant to strengthen each other calls for the incorporation of programme or intervention elements facilitating this process, in order to build relationships and effective team work. For example, the introduction of a supervision system should reflect and take into account power relations and values and norms of the people involved, including those in the community. Health systems research should also take into account the software elements, as effective systems thrive on these elements, and their effectiveness correlates with the strengths and nature of the relationships between all actors.

**Target group and significance for the sub-theme and field-building dimension**

Current insights are put together to trigger a debate between policy makers, practitioners and researchers on what can be done to foster relationships between actors and enhance effectiveness of...
community-level partnerships. The discussion aims to stimulate learning, knowledge sharing and translation.
Gunjan Taneja, National Technical Lead, USAID supported RMNCH+A Scale up Project (IPE Global Limited), India
Abstract ID: 1642

**Strengthening Health Systems by institutionalizing a robust Supportive Supervision mechanism in High Priority Districts in India**

Co-authors: Gunjan Taneja, Rajeev Gera, Pawan Pathak, National Technical Lead, USAID supported RMNCH+A Scale up Project (IPE Global Limited); Project Director, USAID supported RMNCH+A Scale up Project (IPE Global Limited); Team Lead-National RMNCH+A Unit, USAID supported RMNCH+A Scale up Project (IPE Global Limited)

**Background:** To accelerate the pace of interventions for Ending Preventable Child and Maternal Deaths (EPCMD), Government of India (GOI) launched the Reproductive Maternal Newborn Child and Adolescent Health (RMNCH+A) strategy in 2013. Based on continuum of care principles and focusing primarily on strategic life cycle approach, the strategy is holistic in design, and encompasses interventions across the five thematic areas under one umbrella. The strategy has identified 184 High Priority Districts (HPDs) which constitute the poorest performing 25% districts across the 29 states of the country for focused strategic technical support for implementing high impact interventions and effective supervision systems in order to improve maternal and child health outcomes.

**Methodology:** As part of the RMNCH+A intensification efforts across the HPDs, GOI has leveraged support of Development Partners including USAID, UNICEF, BMGF, DFID, UNFPA and NIPI to support the state governments to effectively implement the strategy. A key component of the support includes on site Supportive Supervision (SS) to delivery points using a checklist which captures logistics availability and practices to assess facility level readiness to provide critical RMNCH+A services. Representatives of partner agencies working across the states and HPDs were trained through a comprehensive package on the use of the checklist following which the same is being used to generate data across the HPDs on the implementation of RMNCH+A services in the facilities.

**Results:** Initiated in the state of Jharkhand in October 2014, the SS mechanism has been scaled across the 184 HPDs of the country and data is being generated consistently since April 2015 with the USAID supported Scale Up RMNCH+A Project coordinating the entire effort at the National level. Impacting 8.3 million pregnant women and 7.6 million infants which account for almost 25% of the annual cohort of pregnant women and infants of India, the SS mechanism has been able to strengthen health systems across these districts for better and effective service delivery. A total of 9879 visits across 5355 facilities till February 2016 have provided onsite technical assistance and generated information on 141 critical service delivery indicators, which in turn helped identify gaps and plan actions plans for improved outcomes.

**Conclusion:** The RMNCH+A SS mechanism is a prime example of forging partnerships to achieve impact at scale. Led by GOI and supported by Development Partners, the SS mechanism has been instrumental in effectively and comprehensively leveraging resources for strong and resilient health systems.
Kun Tang, Peking University School of Public Health, China
Abstract ID: 657

**Fighting against Ebola crisis: a case study of China’s roles in strengthening local health systems in Western Africa**

Co-authors: Kun Tang, Xiaomeng Chen, Peking University School of Public Health

**Purpose:** This case study aims to examine China’s Ebola emergency operations in Western Africa and its interactions with local health systems. In particular, the case study will: 1. Identify China’s major strategies and contribution to strengthen the local health system resilience in Western Africa, as well as the establishment of Africa CDC; 2. Examine the challenges which China has encountered during and after the disease outbreak, e.g. risk management, social/cultural factors in emergency disease response; 3. Demonstrate the domestic and international politics and driving forces of China, as an emerging new economy, to participate in global disease control operations;

**Content:** Since Ebola was declared a public health emergency by the World Health Organization in 2014, China has responded positively to this global call for actions. The Chinese government has donated 750 million RMB (110 million USD) emergency humanitarian aid to Sierra Leone, Liberia and Guinea, the three countries which were severely attacked by the pandemic. Moreover, China has also deployed more than 1,000 infectious disease physicians, public health experts and logisticians to Africa to help with the disease control efforts. So far, China has helped constructed three P-3 level biosafety laboratories and trained more than 130,000 local medical staff. This is a milestone event for it is the first time that China has joined the global health community in fighting a major pandemic. It has, in many ways, strengthened local health system: health human resources, training/capacity building, diagnostic technology, etc. More importantly, this has led to China’s strong commitment and support to establish African CDC, a major step to ensure proper monitor and surveillance of future disease outbreak.

As its first overseas global health operation, China has also encountered many problems in this process, e.g. insufficient coordination between Chinese and Western aid teams, unfamiliarity of local system and norms, etc., all of which are important experience for future operations.

**Significance:** This case aims to guide the audience through a series of critical issues in the emergency response of the local health system, from the lens of China, as a new player in global health. The case will identify a number of issues, including infectious disease burden and surveillance, risk management (risk of exposure and infection), socioeconomic determinants of health and health systems (key elements of effective health systems for pandemic response), to establish a deeper understanding of the importance of health system resilience in controlling emergency disease outbreak.
Rassamee Tansirisithikul, Department of Community Medicine, Ramathibodi Hospital, Mahidol University, Thailand

Abstract ID: 649

Copayment and recommended strategies to mitigate its impacts on access to emergency medical services under universal health coverage: a case study from Thailand.

Co-authors: paibul suriyawongpaisal, Samrit Srithumrong sawadee, Wichai Aekplakorn, Faculty of Medicine, Ramathibodi Hospital, Mahidol University

Although bodies of evidence on copayment effects on access to care and quality of care in general have not been conclusive, allowing copayment in the case of emergency medical conditions might pose a high risk of delayed treatment leading to avoidable disability or death.

Using mixed-methods approach to draw evidence from multiple sources (over 40,000 records of administrative dataset of Thai emergency medical services, in-depth interview, telephone survey of users and documentary review), we are able to shed light on the existence of copayment and its related factors in the Thai healthcare system despite the presence of universal health coverage since 2001. The copayment poses a barrier of access to emergency care delivered by private hospitals despite the policy proclaiming free access and payment. The copayment differentially affects beneficiaries of the major 3 public-health insurance schemes hence inducing inequity of access. We identified 6 potential predictors of the copayment i.e., 1) perceived under payment, 2) unclear operational definitions of emergency conditions or 3) lack of criteria to justify inter-hospital transfer after the first 72 hours of admission, 4) limited understanding by the service users of the policy-directed benefits, 5) weak regulatory mechanism as indicated by lack of information systems to trace private provider’s practices, and 6) perceived ineffective arrangements for inter-hospital transfer. Finally, we discussed strategies to address these potential predictors of copayment.
Jean-Luc Taton, Research Triangle Institute International, United States
Abstract ID: 2656

Continuing the critical fight against malaria in Guinea in the midst of the Ebola epidemic

Co-authors: Aissata Fofana, Timothe GUILAVOGUI, Jean-Luc Taton, Richard Reithinger, Research Triangle Institute International; National Malaria Control Program / Guinea

In Guinea, malaria is the leading cause of morbidity and mortality. One of the pillars of Guinea’s national malaria strategic plan are community health workers (CHWs), which carry out the integrated community case management of fevers (iCCM). Specifically for malaria, CHWs carry out home visits, diagnose malaria using rapid diagnostic tests, treat uncomplicated malaria cases with artemisin combination therapies, refer severe cases to health facilities, and provide information and communication with regards to malaria prevention and control.

Community health activities were highly affected by the recent Ebola epidemic, with access to health services dropping dramatically because of the population’s fears of potentially contracting Ebola virus at facilities; facilities closing; and CHWs resigning access to reduction of health facilities visits, closing of some facilities, resignation of CHWs. Thus, in the 14 districts supported by the U.S. President’s Malaria Initiative support StopPalu project, the number of home visits conducted by CHWs dropped from 35,620 (October to December 2014) to 19,481 (January to March 2015). Furthermore, organizations working on the Ebola response further destabilized the community health system by starting to pay salaries to existing CHWs previously working on a voluntary basis, redirecting them to focus only on Ebola surveillance rather than on community health issues.

Despite the difficult and complex Ebola context, Guinea’s national malaria control program was able to implement malaria prevention and control activities throughout the Ebola epidemic in Guinea. Case management protocols at the community and health facility levels were revised according to the World Health Organization guidance for countries affected by Ebola, and StopPalu alone trained 1,041 health-based staff members and 890 CHWs in these new guidelines; regular supportive supervision continued to ensure quality of case management and to motivate health workers; monthly monitoring meetings at both facilities and district levels continued to ensure data on malaria services was collected and reported. As a result of the national malaria control program’s perseverance the number of home visits in StopPalu supported districts increased from 19,481 (January to March 2015) to 37,026 (October to December 2015), with home visits and iCCM resuming in those communities declared “free of Ebola”. All these activities helped to rebuild the trust and confidence of the population in their public health system.
Pat Taylor, John Snow Inc., United States

Abstract ID: 3174

**Role of health and community support systems in successful implementation of integrated Community Case Management (iCCM) of childhood illness; Experience from Bondo, Kenya.**

Co-authors: Dyness Kasungami, Mark Kabue, Dan Otieno, Makeba Shiroya, Charles Waka, John Snow Inc.; Jhpiego

**Background:** Many countries are implementing iCCM using trained Community Health Volunteers (CHVs) to extend case management beyond health facilities. To test the feasibility of implementing iCCM leveraging the current Kenya community health platform, CHVs were trained and supported to provide iCCM in Bondo, Kenya. The project was implemented January 2014 to June 2015. We assessed support provided by the health system through the Sub County Health Management Team (SHMT), Community Health Extension Workers (CHEWs) and community structures established under the community strategy.

**Methods:** A pre and post design was used. All 54 CHVs providing iCCM were assessed on the type and content of supervision, availability of commodities and incentives received. Nine chiefs, thirty eight Community Health Committee (CHC) members and sixteen religious leaders were interviewed to understand their roles in supporting iCCM implementation.

**Results:** Routine monthly supervision of CHVs was done primarily by CHEWs, 98% at baseline and 73% at end line. However, supportive supervision of CHVs by SHMT improved from 2% to 29% at baseline and end line respectively. Three months to the end line survey, supervision focused on strengthening clinical skills as part of an exit strategy. In 88% of visits at end line, the supervisor used simulated case scenarios to mentor CHVs on clinical skills compared to 11% at baseline (p<0.05). Supervision facilitated regular supply of iCCM commodities, although stock outs happened when link health facilities were not adequately supplied by the national medical store. The SHMT also successfully advocated with the County government who took over payment of the monthly stipend in the last six months of the project. Chiefs and religious leaders mobilized people to attend community dialogue days. At these meeting, CHC members presented community data from CHVs to create a common understanding of health issues affecting children. CHCs deliberated on the data with community members and promoted adoption of preventative actions and care seeking behaviors.

**Conclusion:** Successful implementation of iCCM in Bondo was built on innovative health system support by SHMT facilitating supportive supervision, clinical mentoring and institutionalized the payment of stipend to the CHVs. Community leadership and governance created social belonging and cohesion to build credibility of CHVs and increase acceptance of iCCM. Community leaders were brokers between CHVs and community members in promoting appropriate household behaviors to improve the health of children.
Gina Teddy, University of Cape Town, South Africa  
Abstract ID: 739

POLICY AND IMPLEMENTATION GAP: A MULTI-COUNTRY PERSPECTIVE

Co-authors: Gina Teddy, Dintle Molosiwa, Boroto Hwabamungu, Martina Lembani, University of Cape Town; University of the Western Cape

Widespread evidence on implementation indicates that health policies once adopted are not implemented as envisioned and do not always achieve the intended outcomes. The challenges associated with policy implementation gaps have been widely attributed to several factors ranging from problematic policies to lack of governance and resources. Yet countries in low and middle income regions in particular continue to experience these problems in their bid to translate policy into outcomes. This study seeks to understand the complexity associated with health policy implementation and why implementation gaps are increasingly widening in low-and-middle income countries despite countless evidence.

Methodology: An interpretive synthesis of national health policies across three African countries was undertaken to provide insight into the processes and factors influencing implementation outcomes. This thematic synthesis of previous implementation studies explored different components of the health system yet revealed similar challenges associated with implementation gaps. Unpacking and comparing the experiences for Ghana, Botswana and Malawi provided a multi-country perspective and insight to the complexities of transferring policy into outcome. This study builds upon the increasing interest and appreciation for synthesizing previous works in understanding health systems challenges affecting LMICs.

Findings and Conclusion: Common factors contributing towards implementation gaps and policy failures across the three countries include: strategies adopted by governments for the implementation; limited and adhoc actor engagement and policy networking; the impact of power dynamics and politics; lack of trust among actors; community and institutional acceptance of the policies; lapses in knowledge, information and weak communication between policymakers and implementers; service delivery issues such as lack of resources, quality of care; supervision, monitoring and evaluation; and leadership and governance. Health policy reforms are difficult, uncertain and sometimes changed so frequent that actors become resilient to their practices and culture as a coping mechanism, which frustrates attempts to implement policies reforms. The study concludes that implementing health policies is rather a complex phenomenon that triggers unintended consequences and intangible factors often ignored by policymakers, yet have critical impact on policy processes and outcomes.
Karina Temporelli, Instituto Investigaciones Económicas y Sociales del Sur. Universidad Nacional del Sur, Argentina
Abstract ID: 1340

**Health and quality nutrition: access costs and difficulties in public policy design in Argentina.**

Co-authors: Karina L Temporelli, Valentina N Viego, Claudia Cattaneo, Carolina Miotto, Cecilia Merino, Instituto Investigaciones Económicas y Sociales del Sur. Universidad Nacional del Sur; Universidad Nacional del Sur; Universidad Católica de La Plata

Introducción: En la Argentina los cambios demográficos, socioeconómicos y epidemiológicos imponen al sistema de salud la necesidad de hacer frente al incremento de enfermedades crónicas, muchas de ellas provocadas por estilos de vida no saludables y con deficiente calidad nutricional, a pesar de ser uno de los mayores productores de alimentos en el mundo.

En este contexto, el Sistema de Salud no sólo debe enfrentar la tradicional problemática de las enfermedades infecciosas, sino además hacer frente a un incremento en la prevalencia de las enfermedades crónicas.

Muchos de los problemas sanitarios existentes se relacionan con la dificultad para acceder a una adecuada alimentación. Dicho acceso depende de los precios de los alimentos, de la capacidad de compra basada en los ingresos de la población y de sus costumbres alimentarias. Actualmente en Argentina el sobrepeso y la obesidad se incrementan aún en un contexto de carencia de nutrientes esenciales. Así mismo la problemática de la desnutrición tampoco está resuelta.

Objetivo: analizar el costo relativo de acceder a una canasta saludable en relación con otra no saludable y su evolución entre los años 2002 y 2015.

Metodología: Las canastas fueron confeccionadas teniendo como base un adulto equivalente que consume 2700 kilo calorías por día. La canasta saludable fue construida en base a los grupos de alimentos que sugieren las guías alimentarias para la población argentina cuyo consumo permite cubrir los requerimientos nutricionales mínimos. La canasta no saludable fue construida en base a la canasta básica alimentaria de INDEC (Instituto Nacional de Estadísticas y Censos) que no responde a una distribución equilibrada de micronutrientes ni cubre las recomendaciones de vitaminas y minerales. Una vez establecidas estas canastas, el costo de las mismas se obtuvo utilizando la base de datos de precios del Centro Regional de Estudios Económicos de Bahía Blanca (CREEBBA) para un período comprendido entre el año 2002 y 2015.

Resultados: en el período considerado adquirir una canasta saludable cuesta aproximadamente el doble que adquirir la no saludable. Hasta principios de 2007, además la brecha de costos se amplió. Entre 2007 y finales de 2010 experimentó un descenso. Mientras que desde 2011 a la fecha la brecha parece estable, en torno a 80%.

Discusión: la necesidad de mejorar la calidad nutricional de la población de Argentina requiere establecer estrategias que incorporen aspectos relacionados con los mayores costos para acceder a una alimentación saludable a fin de lograr mayor efectividad de las políticas.
Moses Tetui, Makerere University School of Public Health, Uganda
Abstract ID: 1957

The effect of a maternal and newborn intervention on birth preparedness and neonatal care practices in three rural districts in Uganda.

Co-authors: Moses Tetui, Rornald Muhumuza Kananura, Elizabeth Ekirapa Kiracho, Suzanne Kiwanuka, Gertrude Namazzi, Makerere University School of Public Health; Makers University School of Public Health; Makerere University School of Public Health

Background: Globally women particularly from rural communities continue to give birth at home without the presence of skilled provider. Preparing for birth is essential in ensuring that more women deliver with the assistance of a skilled provider in order to contribute to the improvement of maternal health outcomes. Positive neonatal care practices equally need to be promoted in low-income countries so as to cut down on the persistently high mortality. Community health workers (CHWs) play a key role in providing the motivation for women to change behaviors surrounding birth, delivery, and newborn care. In this study we describe the effect of a maternal and newborn health project that utilized the community health workers (CHWs) strategy to improve birth preparedness and newborn care practices in rural communities of Eastern Uganda.

Method: The intervention was designed using a quasi-experimental approach from 2013 to 2015. CHWs were used as the frontline team in sensitizing the community on birth preparedness and newborn care practices. Birth preparedness was measured by the practice of securing essential birth items, transport means and taking an advance decision on where to give birth from. While immediate breast feeding, proper cord care, warm care and delayed bathing were used to assess neonatal care practices. The analysis was done using the difference in difference approach as to a certain the effect of the intervention

Results: Birth preparedness was generally noted to have improved in the intervention area. For example, at end line it was found that the number of women who had at least three birth items at the time of delivery was higher in the intervention area than in the comparison arm (85% Vs 78%, p&lt;0.01) which indicated a 7% project contribution to improving birth preparedness (7%, p&lt;0.05). Similarly, neonatal care practices, improved more in the intervention area compared to the comparison arm. For instance, delaying the first bath of the new born for at least 24 hours was noted to have improved most in the intervention arm (19% Vs 11%, p&lt;0.05) which indicated a 11% significant contribution by the project.

Conclusion: This study has confirmed the use of CHWs in addressing traditional newborn care practices as well as in preparing communities for better birth outcomes. This therefore suggests that, the use of CHWs for behavioral change initiatives could be a useful resource especially in resource-limited settings such as rural communities in low-income countries.
Michael Thiede, Scenarium Group GmbH, Germany
Abstract ID: 1700

**Governing change: Process governance as an imperative in health reform**

Co-authors: Michael Thiede, Scenarium Group GmbH

**Purpose:** Constant policy reform is one of the characteristics of democratic societies around the world. This includes health policy, which is particularly sensitive to changing context including socio-economic shifts, demography, changing disease patterns, medico-technical progress and changing expectations. The achievement of good governance in health systems has been extensively discussed, and the principles of good governance are reflected in many policy documents describing a UHC vision. However, it is striking how often government departments conduct the reform process itself without any consideration of these exact principles. The objective of this study is to explore the implications of an observed lack of governance principles in health reform and the significance of the associated democratic deficit. Based on lessons learned, the study suggests a framework for process governance of health reform.

**Focus/content:** This interdisciplinary study builds on a review of theoretical and applied research and literature on governance in health systems and the public sector. Case studies analyse adherence to governance principles during reform, using structured document research, key informant interviews and systemic constellations. This presentation will mainly refer to a comprehensive case study of the South African process towards National Health Insurance.

**Significance to sub-theme area/field-building dimension:** Previous research on good governance in health claims to have analysed (health) policy reform when it would be more precise to specify the focus on the outcome of the reform process rather than the process as such. Our results highlight the dramatic difference in meaning. They show the structural conflict between existing systems of hierarchies and bureaucracy on the one hand, and more open, embracing systems of networks on the other. They also highlight the strong influence of global stakeholders, ideas, funders and products on processes and dimensions of governance, creating dependencies on global developments. Key dimensions of our analysis of process governance are responsiveness, legitimacy, transparency and participation. Our results show the very practical implications of process transparency and stakeholder participation for building resilient and responsive health systems.

**Good process governance can lead to an efficient and fair distribution of public goods within society. This study shows the significant risks of lack of governance principles in health reform processes. Coherent guidelines for good process governance in health reform are derived from the study’s findings.**

**Target audience:** The presentation is targeted at the research community (particularly political scientists/health policy researchers, health economists), at health policy makers (e.g. ministry representatives) and at civil society representatives.
Uranchimeg Tsevelvaanchig, University of Queensland, Australia
Abstract ID: 2042

Missed opportunity towards financial protection under universal health coverage: Contracting for private services in Mongolia

Co-authors: Uranchimeg Tsevelvaanchig, Anar Ulikpan, Hebe Gouda, Peter Hill, University of Queensland

Background: Mongolia has been confronting challenges to re-establish universal health coverage (UHC) since the collapse of the socialist health system in 1991. At a glance, Mongolia achieved high population coverage under mandatory health insurance (HI). HI benefit package covered both in-patient and out-patient care in public hospitals and only in-patient care in private hospitals. Meanwhile, out of pocket (OOP) expenditure as a percentage of total health expenditure has more than tripled since 1995 reaching 40% in 2013. This is partially explained by a rapid growth of emerging private providers that rely heavily and sometimes solely on OOP payment. This study presents lessons learnt from the Mongolian experience in contracting for private services.

Methods: We used a case study approach with mixed methods. Analysis of nationally representative hospital admission records from 2013 was conducted to explore the current role of private hospitals in Mongolia. Semi-structured interviews were conducted with key informants (N=45), who were involved in or impacted upon by regulations, to further explore the role of private providers in meeting UHC.

Results/Discussions: Private hospitals delivered one fifth of hospital inpatient care in 2013. Most of these private hospitals have contracted with HI and received funding. However, OOP payment in private hospitals incur a great risk to catastrophic expenditure for unemployed and vulnerable people, which accounted for more than half of private sector patients. Many of them were forced to choose private providers due to nepotism driven admission system in the public sector and consequent longer waiting time for remote and vulnerable population. An average direct payment for a single private hospital admission was 160USD. This equals to 40% of individual’s non-subsistence income (income available after basic needs have been met), when income is calculated based upon a minimum annual wage. HI reimbursement rate for private contractors is half the rate paid for public hospitals. Private hospitals have the freedom of setting their own service cost and charging the gap fee from patients. Consequently, private sector patients are at high risk to catastrophic health expenditure despite their insured status.

Conclusion: Without effective cost sharing mechanisms in the private sector, financial protection goals towards UHC will not be achieved in Mongolia, despite higher level of population HI coverage. Prioritization of HI benefit package, fair reimbursement mechanism and cost regulation are crucial to improve financial protection among private sector patients.
Sian Tsuei, University of British Columbia, Canada
Abstract ID: 3248

Does Universal Health Coverage Work? What are we learning from the case of Taiwan

Co-authors: Jerry Spiegel, Sian Hsiang-Te Tsuei, University of British Columbia

Purpose: Universal Health Coverage (UHC) has been touted as “the single most powerful concept public health can offer” that will lead to health equity by minimizing financial barriers to health care access.

However, UHC’s emphasis on minimizing financial barriers to health care service access provides limited consideration of the nature of the services that will be available and their relationship to broader actions that address upstream determinants. Furthermore, inconsistent definitions have led to an lack of agreed-upon measurable outcomes. In this regard, critics have raised concern that reliance on private providers in a neoliberal-oriented health care market can lead to long-term erosion of the health care capacity as private providers shift to take on more profitable services that may have only limited health impact. By focusing on the financing mechanisms of the insurance without dedicating political will to improving people’s health can further miss the opportunity to address social determinants of health. The purpose of this poster is to critically review the progress and challenges being encountered in Taiwan with a focus on key themes and measurements that may inform the global community’s debate around UHC and subsequent LMIC’s policy implementations.

Focus: As a middle income country, Taiwan recently introduced National Health Insurance (NHI) as a way to implement UHC in 1995. However, the language barrier has limited recognition of much of the documented progress and challenges to domestic academic community. This work explores the Airiti mandarin database thematically and critically between years 2012 – 2016 to distinguish themes concerning the monitoring, and evaluation of equity improvement from UHC implementation. It will also draw upon country level evidence where possible. The goal is to address two questions: (1) how have the Taiwanese examined the harms and benefits of NHI? (2) Has NHI harmed or benefited Taiwanese population in general?

Significance: This work uniquely draws upon the relatively isolated Taiwanese medical literature with the international academic community, which is especially timely given the swelling support for UHC. Exploring the two questions around the measurement and net benefit of NHI will inform additional metrics and policies to be considered both domestically and internationally to meet the “Health for All” aspiration. Critical literature appraisal from the standpoint of health equity also builds solidarity with the marginalized population. The dissemination of the findings can further empower activists and scholars working on similar areas to develop and innovate additional key measurement criteria around health insurance.
Lalitha Vadrevu, IIHMR University, India
Abstract ID: 3033

How can research engage with policymakers for improving healthcare for vulnerable populations? – Learning from the knowledge intervention project in the Indian Sundarbans

Co-authors: Lalitha Swathi Vadrevu, Upasona Ghosh, Shibaji Bose, Barun Kanjilal, IIHMR University

Background: Lack of evidence informed policy for populations that are differentially vulnerable is a fundamental barrier to developing equitable solutions. Bridging the research policy gap requires mobilizing various stakeholders using evidence, through effective research-policy linkages. This process is seldom linear and needs to account for a multitude of factors. In the present article, we present the development of a knowledge intervention project that aims to engage and mobilize stakeholders for promoting collaborative action towards improving child health in the geo-climatically vulnerable region of the Indian Sundarbans.

Methods: We adopt a multi-method, longitudinal approach for analyzing the development of the project. The study commenced in 2012-2013 and is currently on-going. Our data includes project data (e.g. internal monitoring data of project activities, documentation from dissemination and engagement events and capacity building activities) and key documents (e.g. original project documents, project plans, stakeholder analysis, theory of change diagrams and publications).

Main findings: The project comprises of three key strategic areas for engaging with academia, government, not-for-profit organizations, media, donor agencies and informal health care providers that are important health system actors — a) Knowledge generation b) Engagement and mobilization using knowledge and c) Capacity building of close to community health system actors. The project underwent a few critical developments and adaptive changes in the first three years. First, there was a shift from tangible dissemination outputs to an increasing emphasis on stakeholder engagements and improving research-policy linkages for affecting change. Second, evidence generation plan was positively informed and altered by the stakeholder discussions, originally assumed to be relatively static. Third, local organizations like community-based organizations and local media were actively involved in discussions as pivotal organizations for voicing people’s concerns.

Factors such as changing socio-political scenario delayed and redefined the project timelines and linkages with the government. It also underlined the need for strong sustained relationships with stakeholders as better predictors of research utilization. Increasing involvement and active engagement of the community-based organizations and capacity building of the local media to act as a facilitator for convergent actions was a crucial development over the course of the project.

Discussion: The knowledge intervention program has undergone adaptive changes in the process of balancing research agenda and stakeholders’ demands and context. It serves as a case to highlight the need for knowledge translation strategies that leverage on the close to community actors for affecting change for vulnerable populations.
Joe Varghese, Health Governance Hub, Public Health Foundation of India, India

Abstract ID: 2620

**Investing in Nurses for Resilient Health Systems: Experience of West Bengal State, India**

Co-authors: Joe Varghese, Solomon Salve, Pallavi Mishra, Bhuputra Panda, Shinjini Mondal, Kabir Sheikh, Health Governance Hub, Public Health Foundation of India

Background: The test on resilience of health systems is whether they are able to maintain core functions and be able to adapt to changing context. One of the yardsticks of resilience of health systems is the ability of the health workers to respond to crisis. This article explores how strategic it is to invest in nurses to create resilient health systems based on the experience West Bengal state in India.

Methods: This paper is based on a qualitative study which compared and analysed the implementation of key governance strategies related to nurses’ leadership and skill building in three states including the state of West Bengal. The study involved state level policy landscaping and 53 in-depth interviews of key stakeholders and experts. The data was thematically analyzed using framework approach for applied policy analysis.

Results: The state of West Bengal has been a pioneer in implementing reforms for nursing sector in India. The states’ health system is clearly demonstrating the advantages of reforming the nursing sector several decades before. We identified three strategies that could potentially contribute to nurses’ ability to create resilient health systems in West Bengal. First, deployment of nurses in leadership positions across the government health department facilitates local leadership for day to day functions of the health system. This reform is accompanied by creation of leadership skills and spaces in decision making. Secondly, strategic additional skilling of nurses in clinical and public health responsibilities provides extra hands for the health system to respond during shocks. The training and deployment of critical care nurses and advanced nurse practitioners are examples of this. Finally, the emphasis given to nursing education rooted in core nursing values helps to earn trust of local population which is considered as a powerful resilience advantage.

Conclusion: Resilient health system requires investment in health workers. Our findings, based on the experience of West Bengal help to understand how appropriate policies for strengthening nursing are able to contribute to resilience of health systems. However, it is important to pay attention to the way they are developed, deployed and utilised which have implications on nurses’ role in creating resilient health systems.
Promoting Indigenous Health in Peru in the Post-2015 Era

Co-authors: Nicole L. Vidal, Suzanne Fustukian, Bregje de Kok, Institute for Global Health and Development, Queen Margaret University

Background: Making up 15% of the world’s poorest (UNDP 2016), indigenous people have historically experienced deeply rooted marginalization and inequality, particularly when it comes to accessing health services. One of the major barriers indigenous peoples face occurs when there is a failure to provide socio-culturally appropriate care. Such failures point to potential weaknesses at the facility level, where health providers might not always meet the needs or expectations of local populations. As indigenous peoples often rely on traditional healing systems alongside Western biomedical care, it is important to develop strategies that incorporate local knowledge into wider health systems. One such example of a community level strategy is the use of community health workers (CHWs) as frontline providers of care. Since their endorsement in the 1978 Alma-Ata Declaration, literature has documented the potential effectiveness of CHW programmes; however, there is still limited information regarding how and why some programmes work and others fail. Drawing on examples from a qualitative study examining the role of indigenous CHWs in Peru, this presentation provides ‘real-world’ examples of successes and failures CHWs have experienced in working towards incorporating local knowledge into formal health services.

Methods: Primary data was collected during a six month period beginning November 2011 and consisted of semi-structured interviews, participant-observation and document review.

Results: Findings from this study suggest that indigenous CHWs can provide socio-culturally acceptable care within their communities. Challenges to providing care occurred mainly within health facilities where traditional healing preferences were largely ignored.

Discussion: With the Millennium Development Goals (MDGs) having transitioned to the Social Development Goals (SDGs), the post-2015 era promises a more holistic approach to improving the lives of marginalised populations. However, despite a greater focus on human rights issues such as health and well-being for all, there is only limited reference to indigenous peoples in the SDGs. Community-level strategies such as CHW programmes may be a positive mechanism to confront social exclusion by incorporating local health knowledge into the wider health system. The challenge for health systems to protect and extend health equity to all, including indigenous peoples thus requires a systematic focus that extends beyond addressing resource shortages and strengthening weak governance. The call to address these issues in the post-2015 era is thus emphasised.
Assessing equity in the provision of primary health care centers in the Buenos Aires Province: a stochastic frontier approach

Co-authors: Valentina Viego, Fernando Pablo Lago, María Florencia Arnaudo, Universidad Nacional del Sur

Background: Central in the thinking about equity in health care is the idea that resources should be allocated purely according to needs, excluding any other factors.

In this paper we study the degree of equity in the availability of public primary health care centers (PHCC) between the 134 municipalities of the Buenos Aires province (Argentina).

For each municipality we estimate the expected number of PHCC that should be available according to the needs of its population. Differences between the actual and estimated figures could be an indication of inequities in the access to primary health care (PHC) services.

Methods: We use stochastic frontier analysis (SFA) to estimate a PHCC production function that follows the specification suggested by Battese and Coelli (1995). As explanatory variables we chose the number of children under 4 years old and the number of people above 65 years old of each district, as they are the population groups with higher health care needs.

To model the variance of error terms, we employed gross regional product (GRP) per capita and the area of each municipality.

Results: Under all the specifications for the non negative error term we tried (half-normal, exponential and truncated normal) the endowment of PHCC at the municipal level is significant affected by vulnerable population groups. The requirements of PHC facilities tend to increase less than proportional with the size of population at risk. Also, wealthier jurisdictions tend to be more equitable but more heterogeneous.

131 municipal administrations (out of 134) exhibit inequities in PHCC provision considering their vulnerable population levels. Only 18 municipalities exhibit an excess capacity. The rest of the jurisdictions seems to have invested less than needed by equity concerns. Moreover, most of PHC surplus capacity emerges from purely positive random factors. In contrast, in the group of districts with a deficit in PHCC provision pure accidental negative effects are not substantive.
Valentina Viego, Department of Economics, Universidad Nacional del Sur, Argentina

Abstract ID: 1570

**Condicionantes socioeconómicos de los factores de riesgo de enfermedades crónicas: un modelo multivariado para hipertensión, hipercolesterolemia y diabetes en Argentina**

Co-authors: Valentina Viego, Karina Temporelli, Department of Economics, Universidad Nacional del Sur

**Introducción:** las enfermedades crónicas y sus factores de riesgo asociados constituyen un problema central de salud pública. La Encuesta Nacional de Factores de Riesgo de 2013 muestra que casi un tercio de la población urbana adulta tiene hipertensión, casi 20% sufre de hipercolesterolemia y 10% fue diagnosticado como diabético. Esta situación genera fuertes presiones sobre el sistema de salud, especialmente en los países menos desarrollados donde las enfermedades infecciosas aún tienen una notable incidencia en los patrones epidemiológicos. Aunque es reconocido que las condiciones socioeconómicas y estilos de vida están estrechamente relacionados con las enfermedades crónicas, el papel exacto y la magnitud que ejercen sobre ellas aún no son bien conocidos.

**Objetivo:** determinar la contribución de las variables constitutivas, hábitos y condiciones socioeconómicas sobre la hipertensión arterial, la hipercolesterolemia y la diabetes en la población adulta urbana de Argentina. **Método:** Se utilizan datos secundarios provenientes de la Encuesta Nacional de Factores de Riesgo 2013, que publica información de una muestra representativa de adultos residentes en centros urbanos. El efecto de los hábitos, condiciones socioeconómicas y características individuales fue obtenido a partir de la estimación de un modelo de probabilidad condicional con tres ecuaciones (triprob) que modelas los eventos individuales de hipertensión, hipercolesterolemia o diabetes.

**Resultados:** el sobrepeso, la obesidad, el nivel educativo y la pobreza incrementan la probabilidad de que un individuo padezca hipertensión, hipercolesterolemia y diabetes. La inactividad física y haber fumado en el pasado resultan también significativas. Las mujeres tienden a sufrir más hipertensión e hipercolesterolemia que los varones. Si bien las tres patologías tienden a aumentar con la edad, la probabilidad de sufrirlas aumenta en forma menos que proporcional con la edad.

**Conclusión:** las estrategias para reducir el sobrepeso y la obesidad, así como ciertos hábitos vinculados a las adicciones y nivel de actividad física juegan un rol decisivo en la y disminución de sus factores de riesgo y la prevención de enfermedades crónicas. Dichas estrategias deben estar especialmente dirigidas a los hogares de menores recursos y las personas con menor nivel educativo a fin de mejorar su eficacia.
Charles Wafubwa, Jhpiego, Kenya
Abstract ID: 1421

**Trends of cases managed at the health facilities before and after implementation of iCCM in Bondo, Kenya**

Co-authors: Charles Waka Wafubwa, Mark Kabue, Dano Otieno, Makeba Shiroya, Dyness Kasungami Matoba, Jhpiego; JSI

Introduction: Inequities in child survival persist between urban and rural areas and different regions of the Kenya. Bondo Sub-county – a malaria endemic area - has high under-five and infant mortality rates (110 and 208 per 1,000 live births), respectively which are above the national averages of 52 and 39, respectively. Staffing challenges are also prevalent especially in rural areas. This can be detrimental to communities especially children. Community health volunteers (CHVs) were trained and equipped in Bondo to implement integrated community case management (iCCM), specifically to manage fever and diarrhoea cases at community level, and refer cases of suspected pneumonia, malnutrition, and sick new-borns to link health facilities.

Methods: A census of under-5 health records was done in the four health facilities linked to four community units where iCCM was implemented. Data from the ministry of health registers were abstracted and equivalent six-month periods before (Jan-Jun 2013) and after iCCM implementation (Jan-Jun 2014) compared.

Results: Overall 2367 and 2079 iCCM cases were managed at the four health facilities, Jan-Jun 2013 and 2014 respectively, representing a 12% reduction. The proportion of fever cases managed in 2013 compared to 2014 decreased, (89%; n=2103/2367 cases vs. 84%; n=1749/2079 cases) respectively, representing a 17% drop, while the proportion of diarrhoea cases remained stable (8%; n=186/2367 in 2013 vs. 7%; n=153/2079 in 2014). However, the proportion of cough/ fast breathing cases increased (3%; n=78 cases vs. 9%; n=177 cases); p &lt; 0.001. Severe malnutrition and ill newborns cases were very few at 19 and 17 respectively.

Conclusion: Trends in reduction of fever and diarrhoea cases were consistent with more of these cases being managed at community level by the CHVs as expected. The spike in suspected pneumonia cases may have resulted from identification and referral by the CHVs. Implementation of iCCM can reduce health facility iCCM caseload, and improve referral linkages.
Linda Waldman, Institute of Development Studies, Brighton, United Kingdom

Abstract ID: 2160

Title: Peri-urbanism in Globalising India: A Study of community perspectives on Pollution and health in Ghaziabad

Co-authors: Linda Waldman, Rajashree Raj, Ramila Bisht, Abhinav Kapoor, Bushra Rizvi, Ritu Priya, Yasir Bhat, Teresa Kumud, Fiona Marshall, Pritpal Randhawa, Institute of Development Studies, Brighton; Jawaharlal Nehru University, Delhi; SPRU, University of Sussex

Background: Brook, Purushothaman and Hunshal described, in 2003, peri-urban India as a ‘space crying out for attention’ (2003: 134). Ten years later, Narain et al. (2013: 10) argued that India’s peri-urban growth is ‘witnessed conspicuously’, where a combination of neoliberal policies, a real estate boom, land speculation, the IT boom and government policy (for the relocation of industrial waste and special economic zones) has ‘transformed the pace of development’. Characterised by a predominance of poor and disadvantaged residents; a lack of services, infrastructure and facilities; degraded natural resource systems (Dupont, 2007) and industrial hazards (Brook et al., 2003; Narain and Nischal, 2007; Narain et al., 2013); the peri-urban is a visible manifestation of urban socio-spatial inequalities. While there is considerable recognition of the intersections between health and poverty in India’s peri-urban context (Sharma and Pawar, 2007; Dongre et al. 2009; Agarwal, 2013; DST, 2008), there remains very little understanding of how peri-urban communities understand and conceptualise their experiences and health.

Methods: This paper is based on qualitative and quantitative fieldwork undertaken in Karhera, Ghaziabad between August 2014 and May 2015. A survey of 1788 households examined household composition, caste, primary/secondary sources of livelihood, home and land ownership. Additional in-depth interviews, participatory mapping exercises, photomapping exercises and costing exercises were undertaken.

Results and Discussion: This paper explores the intersections between agricultural activities, pollution and health in Ghaziabad. It shows how residents’ conceptualization of ‘polluting activities’, such as the use of sewage for crop irrigation is framed, not by biomedical concepts of health, cleanliness and sanitation, but rather by pragmatic livelihood needs such as getting rid of waste water and rapid crop production for sale at markets. In so doing, the paper focuses on the emic and emotive understandings of urbanization and health of peri-urban residents in rapidly-changing Ghaziabad.

Conclusions: Diverse views on pollution, health and risk exist in Karhera. Upper-caste members are either risk ‘deniers’ or risk ‘accepters’, lower-caste members are risk ‘deniers’. Socio-cultural and economic factors offer inadequate explanation of these diverse views, which reflect different survival strategies and the ambiguity of rapid urbanization. This ambiguity is echoed in formal government contexts, where scientific literature has informed government institutions.
Helen Walls, London School of Hygiene and Tropical Medicine, United Kingdom
Abstract ID: 2252

Issues facing health-related international governance: An analysis of bilateral health agreements between South Africa and neighbouring countries

Co-authors: Johanna Hanefeld, Helen Walls, Richard Smith, London School of Hygiene and Tropical Medicine

Background: South Africa’s health system is seeing increasing levels of migration and medical travel, including from countries in Southern, Eastern and Central Africa. This and other cross-border issues have catalysed recognition of need for regional health policy/strategies. In 1999 the Protocol on Health in the Southern African Development Community (SADC) was established, and South Africa later established bilateral health agreements addressing health-related governance with 18 African countries. Such documentation provides a rare example of efforts to establish regional cooperation and regulate patient mobility. The authors analysed these agreements aiming to understand issues addressed and their appropriateness given the mechanism for cross-border health governance.

Methods: The authors obtained copies of bilateral health agreements between South Africa and SADC countries from South Africa’s National Department of Health, and reviewed agreements with 11 countries for which text was available. Agreements were examined against a framework developed using the ‘framework method’ of qualitative content analysis and a constant comparative approach. This process was informed by literature on trade in health services, key informant interviews with policymakers, and the review of agreements. Two authors undertook this, with differences resolved through discussion. Results were triangulated with other authors. Analysis identified three broad categories (with sub-categories) into which agreement issues fall: human resources for health; patient mobility; and collaboration on specific issues.

Results: The 11 agreements cover a wide range of issues but with only moderate consistency and little detail. Under ‘human resources for health’, training/education of health professionals was frequently covered but less so professional registration. Health worker movement into South Africa was not addressed. Under ‘patient mobility’, patient referral was often addressed with limited financial/logistical detail. Some agreements covered planning for patient numbers and treatment reimbursement mechanisms. Quality assurance was poorly addressed, and continuity of care not mentioned. Under ‘collaboration, information exchange and technical assistance’ twinning between institutions was often tackled. Disease surveillance, telemedicine and research collaborations were frequently mentioned. Issues covered included health systems management. Medical products were only mentioned in two agreements.

Conclusion: The lack of detail may be due to the agreements’ high-level nature. However, this raises questions about feasibility/consistency of policy implementation and institutional learning. The agreements are striking for their omission of some critical issues for cooperation in the Southern African region, including movement of health workers from already-stretched health systems into South Africa, and a potential regional market in generic medicines. Further research of implementation in practice is required.
"You know they want you because they need you, not for your science": Ethics and power in academic research between the global north and south

Co-authors: Aisling Walsh, Ruairi Brugha, Elaine Byrne, Royal College of Surgeons in Ireland

Background: Academic health research between the ‘global north’ and the ‘global south’ raises ethical issues at each stage of the research process. Studies in this area show that north-south power imbalances exist, despite decades of research capacity strengthening and an abundance of research partnership principles and guidelines. To date, research in the area focuses primarily on either:

- micro research ethical issues: incorporating traditional definitions of research ethics such as research ethics reviews processes, informed consent and community engagement
- macro research ethical issues: though generally not designated as ‘ethical’ matters, these studies include broader issues of the politics of the research process, from agenda setting to capacity building, to authorship, and how research actors and institutions function and interact.

This presentation reports on a situated ethics analysis of international academic public health research between the global north and the global south, using Zambia as a case study, to develop an understanding of the different ethoses of north-south health research. A situated ethics analysis allows micro and macro research ethics issues to be debated in tandem, and recognises power and culture as being central to international health research.

Methods: Primary data were collected through in-depth interviews with: Zambian researchers (n=20), Zambian national stakeholders (n=8) and northern researchers who had been involved in public health research collaborations involving Zambia and the global north (n=25). An inductive iterative process of thematic analysis was conducted. A situated ethics of health research conceptual framework was developed to analyse the findings.

Results: North-south power imbalances and cultural differences emerged as the most important issues across each of the micro and macro ethics themes. Within these themes, northern researchers gave more weight to macro research ethical issues, while Zambian researchers gave more consideration to micro research ethical issues. While the participants felt that ethical principles are universal, how they are interpreted in practice differs from the global north to Zambia.

Discussion/conclusions: Through developing an understanding of the different ethoses of north-south health research, power imbalances can be identified and uncovered, which could ultimately lead to a shared ethos of partnership. Such an approach also highlights that more culturally contextualised research is needed, at each stage of the research process and in researcher relationships. Micro and macro ethical issues need to be given equal weight in research partnerships, if a shared community of partnership is to emerge.
Assessing capacity to engage in knowledge translation: a cross sectional study of seven research coalitions from sub-Saharan Africa

Co-authors: David Roger Walugembe, Elizabeth Ekirapa-Kiracho, Angela Kisakye, Olico Okui, Rornald Kananura, Moses Tetui, Suzanne Kiwanuka, Makerere University School of Public Health

Background: The knowledge translation (KT) capacity of researchers and research users from low and middle income countries has been reported to be low. However, limited efforts have been undertaken to assess the existing KT capacity. The Knowledge Translation Network (KTNET) Africa, a three year project funded by the Netherlands Organisation for Scientific Research (NWO/WOTRO) and hosted by Makerere University School of Public Health (MakSPH) Uganda, conducted a KT capacity assessment for seven out of eight research coalitions also funded by NWO/WOTRO. These coalitions are based in Rwanda, Burundi, DR Congo, Uganda, Ethiopia, Ghana and Senegal. The overall objective of the study was to assess the generative, disseminative, absorptive and adaptive capacities needed by coalition stakeholders in order to successfully engage in knowledge translation.

Methods: A multi-country cross-sectional survey design using both quantitative and qualitative tools was used for this study. Data was collected from a purposeful sample of 120 respondents that included 25 researchers, 29 policy makers, 12 civil society/NGO representatives, 30 media practitioners, and 24 health service providers. These were identified during the stakeholder mapping exercise that preceded the study. Data was analyzed using a conceptual framework that adapted the Dynamic Knowledge Transfer Capacity (DKTC) model and the Landry framework.

Results and Discussion: Majority of the researchers perceived their capacity to generate the following KT tools and products as adequate; producing journal articles (92%), making conference presentations (88%), compiling reports (88%), organizing meetings and workshops (84%). However, almost a third of the researchers reported having low capacity in; organizing and participating in media briefings (52%), producing newspaper articles (48%), organizing policy dialogues (40%), policy briefs (40%), producing newsletters (36%) and evidence summaries (36%). More than 50% of the research users (policy makers, civil society/NGO representatives, media practitioners, and health service providers) reported that they had occasionally referred to new or existing evidence during their decision making processes. Almost half of the respondents reported that they had never received any KT related training.

Conclusion: The capacity of researchers and research users to identify, access, assess the value of, interpret, apply to contexts and ultimately utilize or support the utilization of research findings for evidence based policy making and the uptake in practice remains limited among low and middle income countries. Efforts to enhance this capacity are still required.
Yu Wang, Peking University, China  
Abstract ID: 2514  

**Rethinking General Health Checks in China's Health System: a Community-based Study from Beijing City**  

Co-authors: Dan Wang, Yu Wang, Peking University  

**Background:** Routine health checks for asymptomatic adults used to be popular in developed countries. In recent years, an increasing number of studies on the effectiveness of health checks revealed that general health checks may not be clinically and economically necessary due to no effective in reducing morbidity or mortality. Countries like the US have begun to re-evaluate and optimize their health check systems. The same industry in China, however, continues to boom. Thousands of health checks centers have been set up over the past decade, and the government regards health checks as one of the promising industries. Nevertheless, there has been increasing critical voice from health professionals about China’s health check industry, such as inappropriate use of medical equipment, false results due to poor service quality and negligence on over-diagnosis and over-treatment.

**Methods:** This study aimed at investigating the awareness and utilization of health checks among the general public in Beijing City. A household questionnaire survey of 800 residents from eight communities across Beijing was conducted.

**Results:** It was found 81% of the respondents took general health checks over the last year, either at one’s own cost (29%) or through employee benefits (71%). Most of the health checks were conducted at public hospitals’ health check departments or private health check centers, both only offer health check service as fixed set-menus based on ability to pay, rather than personalized service based on health risk evaluations. Only 46% of respondents reported that, after taking physical examinations they received subsequent health education or management service. In terms of people’s understanding, over 90% of respondents felt taking routine health checks are necessary for all asymptotic adults and 55% of them believed the more health check items the better. Only 27% of respondents considered general health checks might lead to over-diagnosis or over-treatment.

**Discussion/Conclusion:** Routine health checks has been a common health care activity in China, making the industry over-commercialized and profit-driven rather than focusing on the role of preventive care and health management. The general public lacks of a comprehensive understanding of the purpose, meaning and possible side-effect of general health checks. It is suggested that the government needs to better regulate and standardize the health check industry in China. Health professionals and experts need to carry out more evidence-based studies on the cost-effectiveness of health checks as well as exploring how health checks can be integrated into China’s primary care system.
DAN WANG, Xi’an Jiaotong University, China
Abstract ID: 2306

**Chinese urban elderly people chronic illnesses equity research before and after the new reform ------ In shaanxi province as an example**

Co-authors: DAN WANG, Xi’an Jiaotong University

**Background:** Achieving health equity is an overarching goal set by health care systems globally. China has experienced an increasing health inequality along with the rapid economic growth. With the change of disease spectrum, chronic disease has become the primary factor threatens human health, combined with Chinese population-aging trends, the elderly people chronic illnesses equity poses great challenges to the health reform in China. The study aims to study both income-related health inequality and horizontal equity in China.

**Methods:** The 4th and 5th National Health Services Survey and extended samples in Shaanxi Province surveyed in 2008 and 2013 were analyzed. Health outcome was measured using the prevalence of chronic diseases. The concentration index was calculated to measure the degree of income-related inequality in health. The horizontal inequity was further measured.

**Results:** Compared to 2008, respondents in urban China reported a higher prevalence rate of the self-reported chronic diseases in 2013. There was a pro-rich inequality of chronic illnesses in urban China. Controlling for the demographic factors (i.e. gender), the pro-rich inequity of chronic illnesses remains. Economic and education status are found to be two key factors explaining the pro-rich inequity.

**Conclusions:** Policies related to reduce the residents’ income inequality and improve the education level of the poor should be prioritized to reduce health inequality. The establishment of basic medical insurance in China has shown positive effect on reducing health inequality.

**Keywords:** health inequity, chronic illnesses , elderly people, medical insurance, China

This study aims to fill the gap by analyzing both income-related health inequality and horizontal equity in China using two-wave large-scale representative household survey in Shaanxi Province. Although concentration index has been studied in the previous literature in the Chinese population, this is the first study to present concentration index of the prevalence of chronic diseases using a large-scale representative general population sample. Further research should investigate the different chronic diseases equity to enable sustainable living for current and future generations with a higher quality of life.
Xin Wang, Shandong University, China
Abstract ID: 2119

The influence of relationships among institutions on inpatient readmission flow: Strengthening institutional collaboration in the Chinese health care system.

Co-authors: Xin Wang, Qingyue Meng, Stephen Birch, Shandong University; Peking University; McMaster University

Introduction: After the collapse of the integrated three-tier health care system in rural China during the 1980s, patients could seek health care at their institution of choice without referral. This resulted in cost-escalation and inefficient use of health care resources. The government is trying to rebuild integrated health care systems by strengthening collaboration among institutions, but little evidence exists about which institution to collaborate with and the types of collaboration. This study aims to describe the network of inpatients adopted to a different institution in a county of China and analyse the influence of relationships among institutions on readmission flow.

Method: Case-study methodology was employed to analyse health care utilization in Huangzhong county. Thirteen institutions, nine of them inside the county, four outside the county were included in the study. Information on between-institution relationships (perceived patient referrals, population and patient information sharing and joint training) was collected using a modified version of Provan’s instrument. Data about institution level (township, county, city and province) and location were collected by questionnaire. Over 20,000 records of inpatients who sought service in the thirteen institutions in 2013, were provided by the insurance system. Among them, 510 were patients who attended a second or third institution for the same condition in the two week period following initial admission. Social network analysis was used to visualize the inpatient flow, and Quadratic Assignment Procedure correlation and regression were employed to identify factor determinants.

Results: The density of the inpatient flow network was 0.269. The proportion of the inpatient readmission flow from county hospitals to provincial hospitals was 57.3. Using a reclusion criteria of p<0.05, perceived patient referrals, population and patient information sharing, institutional levels and distance exceeding 30kms are statistically significant. The R2 of the QAP regression was 0.245. Regression coefficients showed the greatest positive impact on inpatient flow was patient information sharing, followed by perceived patient referrals. The estimated coefficient of “distance exceeding 30kms" is negative.

Conclusion: Referral networks perceived by institution leaders, and hence based on trust, are strongly associated with inpatient readmission flow. In Huangzhong, strengthening trust and information sharing with higher-level institutions, particular those located within 30kms, would be instrumental in promoting rational flow of inpatient readmission. These conclusions for Huangzhong county cannot be generalised to other health care systems, but the case study methodology could be employed in other systems, to promote institutional collaboration and health care system integration.
Janine White, University of the Witwatersrand, South Africa  
Abstract ID: 2566

**Mental health of refugees and migrants following exposure to xenophobic violence - a public mental health approach**

Co-authors: Janine Anthea White, Hester Louise Henderson, University of the Witwatersrand; Department of Psychology, University of South Africa

**Background:** Disasters are global phenomena, occurring with physical and psychological consequences among those affected. The mental health care of survivors are often neglected during disasters, despite the literature showing that mental health care is as critical as the medical care given. From a public mental health perspective, which is concerned with improving mental health and preventing mental illness, screening for both mental health and disorder responses survivors present with following exposure may be useful in providing an effective mental health care response. In May 2008, refugee and migrants living in South Africa were exposed to xenophobic violence, which may be described as a human-caused disaster using the Shultz, Espinel et al. (2008) definition of disaster. Refugee and migrant women were particularly vulnerable during this time due to heightened risk for exposure to violence and pathology.

**Methods:** During 2014, a mixed methods convergent study was conducted in Johannesburg to determine the presence of acute stress disorder symptoms (ASD), posttraumatic growth (PTG) and experiences of xenophobic violence among refugee and migrant women. One hundred and three refugee and migrant women completed a self-administered questionnaire, while semi-structured individual interviews were conducted with a sub-set of 22 women.

**Results:** The quantitative results showed a positive, linear association between moderate ASD-total symptoms, as assessed by the Stanford Acute Stress Reaction Questionnaire (SASRQ) (Cardeña, Classen, Koopman, & Spiegel, 2014) and moderate posttraumatic growth-total, assessed by the posttraumatic growth inventory (PTGI) (Tedeschi & Calhoun, 1996). All ASD symptom subscales were predictors of posttraumatic growth. The qualitative results showed that refugee and migrant women were adversely affected by the xenophobic violence, with a prevailing fear that the xenophobic violence would re-occur. There was convergence in the quantitative findings and the qualitative findings for the pathological and adaptive outcomes.

**Conclusions:** First and foremost, policymakers must address xenophobic violence by working towards prevention of this type of violence. In instances where policies fail to address or prevent xenophobic violence, disaster programmes should consider xenophobic violence in disaster planning, particularly the medical care and mental health care response necessary in the aftermath of such an event. Within the mental health care response, intervention programmes should not only focus on alleviating ASD symptoms but also emphasise enhancing or improving PTG.
Using web and SMS based systems to improve human rights for PLHIV and key populations in Ghana

Co-authors: Taylor Williamson, Vivian Fiscian, Isaac Annan, Fred Nana Poku, RTI International; Independent Consultant; Commission on Human Rights and Administrative Justice; Ghana AIDS Commission

Background: In Ghana, treaties, constitutional provisions, legislation and policies protect the human rights of people living with HIV (PLHIV) and key populations, though these groups have little recourse when discrimination occurs. The USAID- and PEPFAR-funded Health Policy Project (HPP) supported the Commission on Human Rights and Administrative Justice (CHRAJ), the Ghana AIDS Commission (GAC), and civil society organizations (CSOs) to develop a reporting system to improve access to justice for PLHIV and key populations.

Methods: HPP conducted 18 interviews of CSOs, government, and international organizations in April 2012 to gather information on reporting system requirements. HPP intervened in three areas: developing a web and SMS-based reporting system to report discrimination to CHRAJ, training CHRAJ staff to manage discrimination cases, and generating demand among PLHIV and key populations. In June 2015, we conducted 21 interviews with the same organizations. HPP also conducted baseline and endline capacity assessments of CHRAJ in October 2012 and June 2015, respectively.

Results: In 2012, CHRAJ had no systems to address discrimination against PLHIV and key populations. Baseline interviews found that CHRAJ had few relationships with PLHIV or key populations and knew little about the legal environment for PLHIV and key populations. It also showed that a legal basis for addressing discrimination existed, CHRAJ had systems and a commitment to tackle discrimination, and that PLHIV and key populations wanted these legal services. Following the intervention, CHRAJ could operate the web and SMS-based system for reporting discrimination, understood how to use legal protections for PLHIV and key populations, had built relationships with PLHIV and key populations, and strengthened internal privacy controls. By February 2016, PLHIV and key populations had reported 61 cases of discrimination to CHRAJ. Many are assault (12) or disclosure of health information (11), but others include blackmail (5), health care discrimination (4), and employment discrimination (3).

Conclusions: While the reporting system provided the technology to link CHRAJ staff and PLHIV and key populations, the intervention also led to new confidentiality procedures, improved trust between CHRAJ, CSOs, PLHIV, and key populations, and outreach from CHRAJ to PLHIV and key populations. The reporting system in Ghana helped improved access to justice, as PLHIV and key populations now receive legal services from CHRAJ. In other countries, using a reporting system will require that a supportive policy and legal environment exists, there is institutional capacity to protect human rights, and PLHIV and key populations are willing to report discrimination.
Responsiveness of public health beyond clinical practice: Success story of mobile shops providing healthy low-priced dinner for economically less advantaged people in Myanmar

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Abstract ID: 1889

Purpose: Advocating success story of innovative ways in providing healthy low-priced meals for less advantaged people

Content: In Myanmar, traditionally, poor rural community eats salty fish-paste as main curry because they work all the day and have no time to prepare dinner and it is affordable. Prevalence of hypertension in Myanmar increase from 18% to 26% over 10 years and risk factors were increase in salt consumption. Although vegetables are available in rural areas, people do not have knowledge and time to prepare healthy dinner. According to the needs of community, innovative public health strategy, low-priced dinner mobile shop, was created in 2015 in Ingapu Township, Ayeyawady Region, Myanmar. The volunteers led by Township Medical Officer cooked bean and vegetable soup, chicken, pork and egg. The team offers their labors for cooking and preparing meals. In the evenings, they put meals onto trishaws and sell with low price for about 70,000 people in need in five health center areas. The prices are as low as half of the price of ordinary shop (one serving for rice with chicken costs only 50 cents). Meals were also prepared, processed and cooked under strict hygienic and healthy style (avoidance of using dye, chemicals, Mono sodium glutamate, Palm oil). It was very successful within a month, the business can run via car and many people from all over the country are interested and duplicate it in 15 townships. The team got the price “The Citizen of Burma Special Award for 2015”. People want to donate meals for the poor contact us. Then list of people in need were prepared. Public health staff distributed donated the healthy cooked curry to 13465 poor households. They have to listen to the short conversation of health education by respective health staff before getting meals. The immediate benefits of this innovative strategy are rural people can get healthy nutritious curry in affordable price and dietary hazard gradually diminished. Moreover, trust building and good relationship had been constructed between health staffs and community which leads to comprehensive health management.

Significance for the sub-theme area: This innovation will strengthen health systems to tackle disease burden of unhealthy diet and malnutrition. It was not only providing healthy meals and knowledge but also promoting cooperated social responsibility of public health staff and community.

Target audience: Policy makers and decision makers to scale up this innovation at national level.
Reverse innovation flow and collaboration in a young global health network

Co-authors: Janna M. Wisniewski, Paul-Samson Lusamba-Dikassa, David Hotchkiss, Tulane University School of Public Health and Tropical Medicine; Tulane University School of Public Health and Tropical Medicine; Kinshasa School of Public Health

Launched in May 2014, the Pan University Network for Global Health (PUNGH) is a thematic engagement network created in response to the need for multidisciplinary, trans-continental collaboration to address global health and other global challenges. As a network, our research focuses on the themes of 1) urbanization and 2) the intersection of communicable and non-communicable diseases, in response to global health priorities, persistent inequalities and shifting demographics. Our collaborative researchers are working on projects in the Caribbean, South Africa, India, China, Germany, and the USA. Central to our network mission is the concept of reverse innovation flow and the exchange of ideas in a way that challenges dominant North-South collaboration paradigms. We prioritize community-based research, open access dialogue, reciprocity and mutual respect. In this paper, we discuss the significance of reverse innovation flow in the development of the network and the challenges for its implementation to date. Two major challenges to PUNGH so far have been: communication and resources. Current funding limitations and structures reinforce unequal relationships between partner institutions and decrease possibilities for communal ownership of network goals and priorities. Heavy faculty workloads, research cultures, and expectations at institutions around the world make commitment to long term goals, such a network strengthening, a challenge to balance with more immediate demands. Given these challenges, the network has been committed to critical processes of reflection and evaluation. Some of our strategies to maintain collaborative relationships have been the development of shared logic model for network evaluation and the reshaping our steering committee to be more inclusive and open to all institutional partners. Each institution has representation in the collective decision making processes. To increase communication, we have adopted multiple methods of information flow, both virtual and in person.
Anika Winn, University of Calgary, Canada
Abstract ID: 3040

**Expectations versus reality: a systematic qualitative review of immigrant women’s experiences of pregnancy in a new country**

Co-authors: Anika Winn, Erin Hetherington, Suzanne Tough, University of Calgary

**Background:** Social support is one of many factors that affect pregnancy outcomes, such as preterm birth and postpartum depression. Immigrant women in particular are at high risk for low-levels of support during pregnancy. Currently in the literature, there is a lack of a comprehensive understanding of how immigrant women’s social connections influence their experience of pregnancy. Therefore, the purpose of this research project is too understand the lived experiences of immigrant women accessing social support in North America during pregnancy.

**Methods:** A qualitative systematic literature review of North American literature focusing on pregnancy experiences of immigrant women, was conducted. Five databases were searched using a defined search strategy. Data was analysed by means of thematic synthesis.

**Findings:** 16 of 3379 articles met the study inclusion criteria, were appraised, analysed and synthesized. “Expectations of pregnancy from home” and “reality of pregnancy in host healthcare system (HCS)” emerged as two of our meta-themes. These two themes were connected by our third meta-theme, “sources of support”, which acted as the broker between pregnancy expectations and reality. Women’s expectations of pregnancy were influenced by their home traditions and these perspectives were supported by family and friends. However, having strong home expectations of pregnancy sometimes led to resistance with the host HCS. Specific host practices during pregnancy, such as providing ice packs, or cold food, clashed with home practices where women stressed the importance of warmth after giving birth. Alternatively, if women had a lack of support provided by their family, they turned to other immigrants and healthcare providers to be their primary sources of support. If trust was developed with these sources of support it could lead to adoption of the host HCS by the expectant mothers. Finally, having a lack of support resulted in the women having challenges navigating and interacting with the host HCS.

**Conclusion:** As far as we know, this is the first study in North America to provide a systematic review of immigrant women’s experiences during pregnancy. Immigration is a relevant issue in Canada, and pregnant women are among the most vulnerable. This study provides crucial information for prenatal care providers, policy makers and researchers to improve the experiences of immigrant women interacting with the HCS during pregnancy. We recommend increased cultural sensitivity in the HCS, and a need for awareness that immigrant women may be isolated in their new country and need additional assistance navigating an unfamiliar system.
Driving regional health workforce agendas into action: the emerging roles and contributions of Asia Pacific Action Alliance on HRH

Co-authors: Thunthita Wisaijohn, Weerasak Putthasri, Masamine Jimba, Viroj Tangcharoensathien, International Health Policy Program, Ministry of Public Health, Nonthaburi, Thailand; Department of Community and Global Health, Graduate School of Medicine,

Since 2000, WHO has driven global agenda through a number of World Health Assembly (WHA) resolutions notably WHA 59.23 on rapid scaling up of health workforce production in 2006, WHA 63.17 on WHO Global Code of Practice on the International Migration of Health Personnel in 2010. Competent and committed health workforce is essential in providing health services to the population. Despite global advocates and resolutions by WHA, slow and uneven progresses have been observed since the first global forum on HRH in Kampala Declaration in 2008, the second global forum on HRH at the 5th Prince Mahidol Award Conference in 2011, and the third global forum on HRH in Recife, Brazil in 2013. The Asia Pacific Action Alliance on Human Resource for Health (AAAH), a partnership network consisting of sixteen countries in WHO South East Asia and Western Pacific Regions emerged in 2006 in response to the calls for strengthen health workforce in the Region. This study described how AAAH evolved from a discussion based partnership in its seven consecutive annual conferences between 2006 and 2012 to evidence informed policy platform in 2012 by strengthening country capacities in generating evidence and influencing policy. Qualitative method was applied including reviews and synthesis of relevant documents.

Findings showed that policy relevant researches are critical in particular which rural retention policies work and how to manage the emerging private health professional training institutes in achieving national health goals. Due process of engaging policy stakeholders in the research supported policy uptake as evident in a few countries. Finally AAAH has proved that collegial, long-term trust-based relationship can thrive and contribute despite scarce funding mobilized on an ad-hoc basis when needs arose. For conclusion, AAAH is a platform for such learning and sharing and to strengthen country capacities in generating evidence and use of evidence to influence policy. Such learning and sharing if managed well and all are committed, it can inspire and drive agenda by country partners.
Janna Wisniewski, Tulane University School of Public Health and Tropical Medicine, United States
Abstract ID: 3167

Community empowerment and accountability in health services: a community scorecard approach in the Democratic Republic of Congo

Co-authors: Janna M. Wisniewski, Paul-Samson Lusamba-Dikassa, David Hotchkiss, Tulane University School of Public Health and Tropical Medicine; Tulane University School of Public Health and Tropical Medicine; Kinshasa School of Public Health

Operating under the premise that peoples’ needs are best met when authorities are responsive to the public, community participation initiatives encourage citizens to engage those in power to advocate for their own interests. These initiatives have shown potential for strong impact on governance and accountability in health services at both the community and system level. This study examines one such initiative, a community scorecard intervention underway in three regions of the Democratic Republic of Congo. The intervention encourages community members and health workers to score their health services on a range of indicators important to the community, then brings them together to strategize toward improvement. The aims of this research are to assess how and why communities’ sense of empowerment changes over the course of the intervention, to explore the ways in which communities begin to advocate for themselves, and to determine the reasons why increased community empowerment does or does not lead to improvements in health services.

This study uses quantitative data collected in health facilities before and after the community scorecard initiative began, and qualitative data collected at two points in time during the first year of the intervention. Early findings indicate that communities are embracing the idea of ownership of their health facilities and are lobbying health workers for changes to operating procedures and the patient experience. Preliminary qualitative data suggests that utilization of health facilities is increasing as a result. At the same time, communities and health workers are uniting to advocate for their common interests at higher levels in the Ministry of Health. It remains to be seen whether such advocacy will achieve the intended results.

Increasing community participation and empowerment is seen as an intrinsic good as well as a means by which to achieve community and system level improvements where formal governance structures are insufficient. Further, it is anticipated that successful initiatives will lead to sustained improvement, as community participation instills a sense of ownership of health services. This study offers evidence related to the effectiveness of one such initiative to foster community empowerment in a post-conflict country with a history of weak governance within the health system. Findings may be of interest both to those focused on improving community participation and those seeking to include it as an aspect of broader efforts to improve health services in similar settings.
Diane Wu, Women's College Hospital, University of Toronto, Canada
Abstract ID: 2429

**Identifying reverse innovations: A framework to select promising health innovations in low-income countries to improve care in high income countries**

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Proposal: Low- and middle-income countries (LMICs) are developing innovative health solutions that may improve healthcare in high-income countries. These solutions range from goods and services to new policies, new technologies, or new management strategies that may affect the access, cost, or efficiency of healthcare. However, there are no frameworks available to help policymakers and funding agencies to identify innovative products, processes or policies from LMICs that are likely to be successfully adapted in high-income countries (HICs). Thus, it is difficult for decision-makers to efficiently screen LMIC programs to efficiently identify and prioritize candidates. We present a set of criteria for evaluating the potential impact of LMIC innovations in new HIC settings.

Methods: We drafted an initial framework based on a purposive review of cases and relevant literature. We then revised the framework criteria through a review of 24 innovative LMIC programs in the Center for Health Market Innovations (CHMI) database, and then iteratively tested the criteria on another 60 CHMI programs. We then convened a group of twenty international healthcare experts from industry, government, and academia to shape the criteria via a modified Delphi process. We further refined the criteria on a database of reverse innovations submitted to a competition led by the Ivey International Centre for Global Health in Ontario, Canada.

Results: The resulting 8 criteria are divided into two steps. First, innovations are assessed according to their success within the LMIC context according to metrics of improving affordability, accessibility, cost-effectiveness and scalability. Next, they are scored for their potential for spread to HICs, according to their ability to address a HIC healthcare challenge, compatibility with infrastructure and regulatory requirements, degree of novelty, and degree of current collaboration with HICs. Through the process we see that some programs, which are initially promising due to their success and scale, are unlikely for success in the HIC setting due to feasibility concerns.

Implications: Reverse innovation may be useful for public, private, and “third sector” organizations, particularly those that are interested in affordable approaches to meet population needs. This study presents a framework for identifying reverse innovations that may be useful to policymakers and funding agencies interested in improving the adoption of LMIC solutions in high income countries. Soliciting expert feedback and consensus on an empirically-derived set of criteria provides practical tools for funders and elements that can be tested prospectively by drawing on existing program databases.
Haja Wurie, Liverpool School of Tropical Medicine, United Kingdom
Abstract ID: 1361

Building a resilient health system post Ebola: voices of health workers from Sierra Leone

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Background: The health system in Sierra Leone was already weak and over-burdened prior to the Ebola outbreak. It was further weakened by the crisis and all efforts made in the post conflict era (since 2002) to strengthen the health system to provide universal healthcare have suffered a major setback.

There was a delayed response to the current outbreak due to a number of factors ranging from governance and leadership, lack of readiness in the health facilities and human resource challenges. This study explored how the health system responded to the Ebola crisis, from a health worker perspective, to unpick the factors that supported or hindered health workers’ abilities to cope with the crisis and generate findings that can be utilised in rebuilding and enhancing resilience in the crumbling health sector.

Methods: This study was conducted in four districts in Sierra Leone, using the following methods: Key informant interviews (n=19): with members of the District Health Management Teams and local councils, health facility managers and international partners working in the study districts. In depth interviews with health workers (n=24): working in public health facilities and international health workers involved with the treatment of Ebola patients.

Results: Although there were many well documented barriers, such as lack of essential equipment and training in infection prevention, we also found important supporting factors: training helped health workers overcome fear and become more confident about providing care; being given the appropriate equipment to be able to do their job safely; peer, family and community support; a social media platform helped health workers deal with challenges; workshops that provided emotional support and ways to deal with the social stigma associated with being a health worker; the risk allowance motivated some staff to work in the facilities and provided an additional income source which helped cope with the increased cost of living.

Conclusions: Health workers are at the heart of the health system, and therefore listening to their voices about what helps them stay and do their job in the midst of a crisis is vital if we are truly committed to building a resilient and responsive health system. The challenge is building these into routine systems, pre-empting shocks, rather than waiting to respond belatedly to crises.
Zheng Xie, Peking University, China  
Abstract ID: 2586

**Factors associated with village doctors' basic public health services provision for non-communicable diseases prevention in rural China**

Co-authors: Zheng Xie, Changsheng Deng, Tongtong Li, Trudy Lei, Peking University; Guangzhou University of Chinese Medicine; Columbia University

**Background:** Non-communicable diseases (NCDs) emerge as a remarkably severe threat to China in recent years. To ensure equity and accessibility of public health services for NCD prevention in rural areas, the Chinese central government has launched a series of policies to motivate village doctors to provide services for NCD prevention. The study aims to identify factors associated with village doctors’ basic public health services provision and to formulate targeted interventions in rural China.

**Methods:** Data was obtained from a survey of village doctors in three provinces in China in 2014. Using a multistage sampling process, data was collected through the self-administered questionnaire. The data was then analyzed using multilevel logistic regression models.

**Results:** The high-level basic public health services for non-communicable diseases (BPHS) provision rate was 85.2% among the 1149 village doctors whom were included in the analysis. Among individual level variables, more education, more training opportunities, receiving more public health care subsidy (OR = 3.856, 95% CI: 1.937–7.678, and OR = 4.027, 95% CI: 1.722–9.420), being under integrated management with township health centers (OR = 1.978, 95% CI: 1.132–3.458), and being a New Cooperative Medical Scheme (NCMS) insurance program-contracted provider (OR = 2.099, 95% CI: 1.187–3.712) were associated with the higher BPHS provision by village doctors. Among county level factors, Foreign Direct Investment Index showed a significant negative correlation with BPHS provision, while the government funding for BPHS showed no correlation (P > 0.100).

**Conclusion:** There is considerable room for improvement regarding the factors associated with village doctors’ BPHS provision for non-communicable diseases. Specifically, three key areas have been elucidated in order to increase BPHS provision in rural areas: (i) increasing public health care subsidies for village doctors and ensuring transparency in the allocation of government funding to village clinics, (ii) mobilizing resources and village doctors to provide and attend ample training programs, and (iii) expanding NCMS contracting with village clinics and partnering with township health centers for integrated management.
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Abstract ID: 3370

**System Redesign of End-of-life care – utility of synthesis of methods in complex interventions in health**

Co-authors: Eng Kiong Yeoh, Eliza Wong, Roger Chung, SF Lui, Diane Threapleton, The Chinese University of Hong Kong

**Background:** The public sector in Hong Kong provides 90% of secondary and tertiary care and 20% of primary care to a population of 7.24 million, funded by general government revenues. 15% of the Hong Kong population is aged 65 and over, life expectancy is 81 for men and 87 for women. 90% of deaths are in public hospitals. This study was commissioned by the Hong Kong government, one objective was to redesign the system of end-of-life care to improve the quality and enable choice for patients.

**Methods:**
The methodical approach in developing complex interventions was utilized comprising:
1. Assessing practical gaps using current knowledge and practice
2. Identifying solutions and assessing impact
3. Assessing issues, barriers and facilitators (pre-condition) related to the intervention
4. Link the re-conditions to evidence-based interventions
5. Design of interventions for implementation, incorporating intervention and implementation components
6. Pilot of the re-designed system for end-of-life care

**Logic-model:** A logic model framework matrix comprising vertical & horizontal axes, was developed to identify links between the health sector facilities and service units providing end-of-life care, the current stage of knowledge and the gaps in current practice, and assessing the issues, barriers and facilitators which serve as the pre-conditions of potential solutions. Systems dynamic modeling will be used to assess the impact of interventions identified.

**Results:** The trajectory of the patients journey through the health system at the end-of-life was mapped and represented in a diagram, depicting a sequential causal relationships of the pre-conditions which need to be met to enable patient-choice of end-of-life care in 6 potential settings of dying, in acute hospitals, convalescent hospitals, hospice units, residential-care homes, nursing homes and their own homes.

2 common pre-conditions for a good death in all 6 locations was the reliable prognostication of end-of-life to enable advance-care-planning and adequacy of facilities for burial and cremation and funeral rites. Specific pre-conditions were identified for quality end-of-life care in residential care and nursing homes and dying-at-home, was appropriate and necessary medical and nursing support. Addressing legal barriers in reporting deaths was also another pre-condition.

**Conclusion:** The challenge in reengineering effective health system is addressing the complex relationships between structure, technical and behavioural components. A synthesis of different system
tools in required. Logic model framework matrices incorporated into complex intervention stages can generate implementation components which can be assessed by systems dynamic modeling for impact.
Ensuring a resilient and effective health workforce post-conflict: findings from a health worker survey in Timor-Leste

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Background: Coming out of conflict and as a newly independent national, Timor Leste had to rapidly expand its health workforce and adopted training approaches which focussed on rural service. The objectives of this study were to understand the labour market dynamics among health workers, including their preferences and concerns, and to assess the skills, competence and performance (i.e. the ‘know–do gap’) of doctors working in Timor-Leste.

Methods: This cross-sectional survey was implemented in all 13 districts of Timor-Leste in 2014. We surveyed 443 health workers, including 175 doctors, 150 nurses and 118 midwives (about 20% of the health workers in the country). We also observed 632 clinical consultations with doctors, including 442 direct clinical observations, and tested 190 vignettes.

Results: The study highlights some positive findings, including the gender balance of health staff overall, the concentration of doctors in rural areas, the high overall reported satisfaction of staff with their work and high intrinsic motivation, the positive intention to stay in the public sector, the feeling of being well prepared by training for work, the relatively frequent and satisfactory supervisions reported, and the good attitudes to patients identified in observations and vignettes. However, some areas require more investigation and investment. The overall clinical performance of general practitioners was very good in terms of attitude and moderate in regard to history taking, health education and treatment. However, the average physical examination performance score was low. Doctors performed better with simulated cases than the real cases in general, which means doctors have better knowledge and skills than they actually demonstrate. The factors that were significantly associated with the clinical performance of doctors were location of the health facility (urban doctors were better) and consultation time (cases with more consultation time were better). Regression analysis suggests that lack of knowledge was significantly associated with lack of performance, while lack of motivation and equipment were not significant.

Conclusions: The survey provides essential information for workforce planning and for developing training policies and terms and conditions that will attract and retain medical staff in rural service. Improving the work environment and performance of doctors working in rural health facilities and ensuring compliance with clinical protocols are two priority areas needed to improve the performance of doctors in Timor-Leste. It also provides important insights on the human resource strategies adopted in Timor Leste, which will be of interest to other countries facing health workforce crises.
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Abstract ID: 1438

Digging Beneath the Iceberg: Identifying the Expanded Programme on Immunization Status of Mobile Migrant Children in Delta Region, Myanmar

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Background - Migration affects the National Immunization Coverage and influence the spread of infectious diseases. The study aimed to determine the immunization status and factors influencing immunization of migrant children.

Method - A cross-sectional descriptive study was conducted in 87 villages in Bogale and Mawlamyinegyun Townships during 2014 focused on internal migrants who are moving around within the country. A total of 493 migrant mothers having children under two-year old were selected by snowball sampling after collecting migrants information from Basic Health Staffs (BHSs) in each village and interviewed with semi-structured questionnaires. Fifteen Focus-Group-Discussions with migrant mothers and Key-informant-Interviews with 56 Voluntary Health Workers, 25 BHSs and 12 Village Health Committee members were performed.

Results - Migrants were identified into four types - inbound migrants (222/493, 45%), outbound migrants (194/493, 39.4%), mobile hawkers (25/493, 5.2%) and local mobile (52/493, 10.5%). Among 17 months to two years old migrant children, only 35 (17.76%) received full dose of Expanded Programme on Immunization (EPI). Number of children with complete immunization was highest in local mobiles who frequently travel outside of their residential villages for not more than one month (5/20, 25%) and lowest in hawkers (1/9, 11.1%). 10.7% of children did not get any dose of EPI. More than two third of migrant mothers said migration was the main reason of missing EPI. Nearly half of them refused EPI because of their misbeliefs. Majority of migrant mothers did not aware the date and place of immunization at their destination villages. A few claimed transportation barriers and travel expenses to the place of immunization. Some BHS stated migrants were not included in their immunization due lists. BHS could not be able to determine which dose to administer because migrant mothers could not tell the dose that had been given. Some migrant mothers also did not have immunization cards. Majority of BHS suggested the local authority and employers could support them by collecting and sharing lists of under 2-year old migrant children.

Discussion/Conclusion - In the study, only 17.76% of 17 months to 2 years old migrant children received full dose of EPI while 78% of children in general population of study townships received full dose. In conclusion, there should be a strong collaboration between health care providers, local authorities and employers to be able to get information of migrants. There should be a specific service delivery for migrants ensuring the better childhood immunization coverage.
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Abstract ID: 2387

Cost effectiveness analysis of the prevention of mother-to-child HIV transmission regimens in heterogeneous HIV prevalence and urban-rural contexts: applying decision model analysis

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Background: Cost effectiveness analysis has been instrumental for choosing an optimal intervention and to inform technical efficiency of resource in the health sector. However, this evidence has been limited particularly in the heterogeneous HIV prevalence urban-rural settings. This study assessed the cost effectiveness of alternative PMTCT regimens across heterogeneous HIV prevalence urban-rural settings in Ethiopia.

Methods: The study employed a decision model to analyze the cost-effectiveness of three PMTCT regimens (regimen A, regimen B and regimen B+) from the perspective of society, healthcare provider and patient. Relevant service and patient costing inputs were collected from twelve health facilities (6 urban & 6 rural) across six regions (Amhara, South Nations and Nationality People, Harrar, Dire Dawa, Oromia and Addis Ababa) in Ethiopia, while effectiveness and epidemiological parameters were collected from secondary sources. The incremental cost effectiveness ratio (ICER) was computed which were then used to compare the regimens across the aforementioned contexts. Cost and health outcomes were discounted at a discount rate of 3%. CEA ranking and roll back analysis was conducted using treearge pro 2015 software.

Results: At the base case analysis, considering societal perspective, option B+ regimen was the most cost effective strategy with an ICER of ETB 640,285 (USD 32,550.54) and ETB 272,314 (USD 13,843.78) in urban and rural settings, respectively. From the healthcare provider and patient perspective, option B+ was a cost-effective strategy at ETB 456,475 (USD 23,206.07) and ETB 39,518.72 (USD 2,009.03) cost per HIV infection averted, respectively. Applying the WHO-CHOICE threshold, option B regimen was found to be a highly cost effective strategy from the healthcare provider (at ICER of ETB 5,079 (USD 258.23)) and patient perspective (with an ICER of ETB 1,739.29 (USD 88.42)), but not from the societal perspective with an ICER of ETB 13,064.61 (USD 664.17).

Conclusion: The cost per HIV infection averted in urban settings was twice the cost in rural settings. The ICER varied across urban-rural settings, and from the three perspectives (societal, healthcare provider and patient). However, option B+ regimen was found to be a more costly and highly effective strategy across all perspectives. Depending on the willingness-to-pay, either option B+ or option B regimen would be recommended as a cost-effective strategy.
Dawa Zhaxi, Tibet University Medical College, China  
Abstract ID: 732

**Capacity development and systems strengthening in Tibet**

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**Purpose:** Tibet Health Capacity Building Program (THCBP), a partnership between the governments of Australia and China aims to build management capacity of health services throughout Tibet Autonomous Region and also strengthen technical/clinical skills and knowledge within the health workforce with the goal of improving the health of the people in Tibet.

**Focus/content:** The Regional Tibetan Medicine Hospital (TMH) is one of the main hospitals in Tibet, with a hundred-year history and a strong reputation, especially in the provision of traditional medicine. A needs assessment revealed outdated management systems, insufficient hospital process management, limited professional competence and poor information systems. A participatory operational research process (document and systems review, focus groups and key informant interviews) led to agreed improvement outcomes.

The aim was to improve in five key areas: information management, financial management, division management, nursing management, and medical quality management. The key outputs were an updated Management Information System; a revised and efficient finance system; and improvements in clinical practice and staff management. THCBP invited experts from inland China to conduct a series of short-term management capacity building training classes, including management basic theories, health management, health law, medical quality management, hospital infection control management, financial management, nursing management. Also, eleven nurses from TMH were sent on placement to hospitals in inland.

The capacity development inputs resulted in both systemic and practice outcomes. An electronic medical record system was introduced by the TMH information department, with financial charging at its core. As a result the Vice Director of TMH became a permanent member of China Health Information Association Electronic Recipe Hospital Information Association, facilitating exchanges and cooperation between TMH and other membership agencies in China. The work placements resulted in radical changes in nursing practices and operating rules and regulations, including rostering, patient hand-over procedures, patient follow-up, health information, and more formalized and ratified nursing guidelines. Financial management was improved and updated with new financial rules and regulations implemented. Similarly, quality control measures were introduced, notably in regards to collection and distribution of the blood supply.

**Significance for the sub-theme area/field:** Building dimension of relevance and target audience.

This is a good example of new partnerships and collaborations where the THCBP was able to link the TMH with other more advanced and sophisticated hospitals and institutions in inland China. Inland
experts provided advice and assistance that have created new and valuable professional and institutional learnings, linkages and networks.
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Abstract ID: 2209

**Analyzing the inequality of health-related quality of life and its decomposition for the elder in China**

Co-authors: Zhongliang Zhou, Zhiying Zhou, Jianmin Gao, Gang Chen, Xi'an Jiaotong University; Flinders University

**Background:** Achieving health equity is an overarching goal set by health care systems globally. China, as one of the largest developing countries in the world, has witnessed increased health inequalities along with the rapid economic growth. As the population is aging, the health inequality for the elder became to be one of the principle concerns in China. The Chinese government has initiated a series of health reforms to improve health equity. The study aims to analyze the inequality of health-related quality of life (HRQoL) and its decomposition for the elder in urban and rural China.

**Methods:** Data was drawn from the 4th and 5th National Health Services Survey (NHSS) and extended samples in Shaanxi Province surveyed in 2008 and 2013, respectively. A multistage stratified cluster random sampling method was used to collect a representative sample in urban and rural Shaanxi Province in each wave. The final study sample consists of 2,873 respondents in 2008 and 11,666 respondents in 2013. Health outcome was measured using the EQ-5D-3L utility, scored by the Chinese-specific tariff. The concentration index was calculated to measure the degree of income-related health inequality and was further decomposed to study the strength of different contributing factors to explain health inequality.

**Results:** Descriptive analysis shows that compared to 2008, respondents in urban China reported a higher HRQoL in 2013 (0.8926 vs 0.8824). However, the respondents in rural China reported a lower HRQoL in 2013 than in 2008 (0.8462 vs 0.8503). There was a pro-rich inequality of HRQoL in both urban and rural China. For the urban and rural elders, the concentration indices of HRQoL are 0.0061 and 0.0098 in 2008 and are 0.0099 and 0.0098 in 2013. The elders’ economic status, living arrangement (alone or with spouse), education status and exercise frequency are found to be the key factors explaining the pro-rich inequality. The establishment of basic medical insurance in rural China has shown positive effect on reducing health inequality, whilst the effect of basic medical insurance schemes in urban China is still limited.

**Conclusions:** Strategies to reduce the inequality of elders’ economic and educational status, through further implementing the poverty reduction policies, should be prioritized by the local government. In addition, the government should strengthen the pension system not only for urban resident but also for rural residents.
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Abstract ID: 1684

The Effect on Cesarean Section Rates of an SMS Based Educational Intervention for Pregnant Women in rural China

Co-authors: Zhongliang Zhou, Dan Wang, Xi'an Jiaotong University

Background: Interventions are needed to reduce China’s extremely high caesarean section delivery rate (up to 54.9%). The purpose of this study is to evaluate the impact of different informational text messages (SMS) regarding prenatal health and delivery mode on rates of caesarean section delivery among 6,000 women in rural China.

Methods: A quasi-randomized controlled trial was conducted to measure the impact of different types of SMS messages on self-reported mode of delivery. Participants were randomized into one of four groups, each receiving a different set of messages, including 1) a comparison group that received only a few “status-quo” messages, 2) a group receiving messages primarily regarding care-seeking, 3) a group receiving messages primarily regarding good household prenatal practices, and 4) a group receiving all messages. These messages were delivered throughout pregnancy and were tailored to the woman’s gestational week. The proportion of women in each group that reported delivering their child via caesarean section was selected as the main outcomes measure.

Results: In the unadjusted analysis, neither the care-seeking nor good household prenatal practices texts alone were associated with lowered odds of undergoing caesarean section. In combination, they were associated with an odds ratio (OR) of 0.78, which did not achieve traditional significance levels, p=0.085. However, looking at the subset of women who reported actually receiving program text messages paints a different picture. CS messages alone were associated with an odds ratio of 0.71 (p=0.045). Care Seeking and Good Household Prenatal Practices together was associated with a highly significant reduction in the odds of undergoing caesarean section (OR = 0.65, p=0.008). Adjusting for potentially confounding covariates in the full set of observations shows that the group receiving all texts is associated with an almost significant odds ratio of 0.74, p=.058. Focusing on the subset of women who actually received program text messages, adjusting shows care-seeking messages to be associated with an odds ratio of 0.64, p=0.017, and the message group receiving all texts was associated with a highly significant OR of 0.59, p=0.004.

Conclusions: The full set of text messages has reduced the number of caesarean deliveries most significantly among women who reported actually receiving program texts. Given numerous calls for strategies to reduce the rate of medically unnecessary caesarean sections in China and elsewhere, an SMS based educational intervention for pregnant women is an effective approach to change the demand-side behaviors.
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Abstract ID: 3126

‘Who would want to work in the TB clinic?’ Organisational factors influencing motivation of tuberculosis health workers in two designated hospitals in Zhejiang Province, China

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Background: In China, tuberculosis (TB) care, previously provided by the vertical TB program, has recently been integrated into ‘designated’ public hospitals at county level to improve quality of care. This study examines the organisational factors contributing to low motivation and instability among TB health workers in the designated hospitals in Zhejiang province, China.

Methods: This study was conducted in two TB designated hospitals in which a TB clinic was set up to provide TB diagnosis and treatment, and funded either through local government, or the hospital itself. Hospitals were selected from two counties with similar economic development, TB prevalence, and size of TB clinics. We conducted 43 in-depth interviews with health officials, TB/hospital managers and TB clinicians, radiologists, laboratory staff and nurses.

Results: Interviews revealed that professional identify of TB health workers was perceived as low, likely due to the perceived ‘over-simplified’ TB treatment, limited professional development, and social stigma surrounding TB and patients who had TB. In both sites, TB health workers were dissatisfied with the perceived gap in salaries as compared to other clinical staff. In one site, TB staff received a fixed bonus only at the rank of logistical staff; in the second site, the performance-based payment system was implemented while the TB doctors had poor income generation ability due to the free treatment policy and limited room to prescribe more expensive medical tests. In both sites, health workers were concerned about the risk of infection due to poor infection control and risk assessment systems.

Discussion/conclusion: In both sites, staff motivation was low and stability of workforce for TB services was consequently jeopardized. In one site, recruitment and retention of TB health workers was extremely challenging, while in the second site, the TB clinic staffing was unstable with uneven availability of health workers from various departments. Our study indicates that workforce issues for TB control in China, specifically the welfare of infectious disease control workers has not received due priority, as public health work is not seen as a source of income for Chinese hospitals. In the era of increasing public health emergencies, infectious disease control work in the hospital should be highly valued through improved professional status, payment and risk protection.