Antimicrobial resistance (AMR) - A Factsheet

Antimicrobial resistance makes drugs ineffective against disease causing pathogens

Antimicrobial resistance is the ability of microorganisms such as bacteria, fungi, viruses, and parasites to protect themselves against the effects of antimicrobial drugs such as antibiotics, antifungals, antivirals, antimalarials and anthelmintics. As a result, the medicines become ineffective and infections persist in the body, increasing the risk of spread to others.1, 2

Increasing resistance to antibiotics contributes substantially to AMR

Antibiotics are medicines that work against infections caused by bacteria. However, in the presence of an antibiotic, resistant bacteria survive and increase in numbers. So-called ‘superbugs’ such as Methicillin-resistant Staphylococcus aureus (MRSA), have emerged to pose major threats to health. Some bacteria are resistant to multiple kinds of antibiotics making infections untreatable.3

AMR is already a major global health challenge

The UK Government’s review on AMR4 summarises the dangerous consequences of AMR:

1. Infectious diseases which are now considered diseases of the past, or of poverty, will become common and untreatable.
2. Treatments for non-infectious diseases which rely on antibiotics to prevent opportunistic infections, such as chemotherapy for cancer, will be in jeopardy.
3. Common surgical procedures will become unsafe if antibiotics are not available to reduce the risks of post-operative infections.
4. Healthcare costs will increase several folds due to more expensive and longer treatments.2, 3, 8

In Low and Middle Income Countries ‘excess’ has to be balanced with ‘access’

While in high-income countries overuse of antibiotics has led to a shift to more expensive second- and third-generation antibiotics—patients in low- and middle-income countries often do not have access to life-saving antibiotics.

The number of deaths due to lack of access to antibiotics in LMICs can be higher than deaths due to AMR.4, 5

Antibiotic resistance is already a huge problem in many settings
Antibiotics are overused in humans, animals and in the environment

Antibiotic resistance is a result of inappropriate and excessive antibiotic use, within both human and animal health systems. Between 2000 and 2010, global antibiotic consumption grew by over 30%, with per capita consumption highest in high-income countries, but growing most rapidly in LMICs. Antibiotics are routinely used for animal growth promotion and disease prevention, and in crop agriculture. The demand for antibiotics in human health systems of LMICs, combined with weak or weakly enforced legislation, promotes their excessive use in human health. Beyond these immediate factors, the drivers of antibiotic use depend upon the extent of disease prevention in different contexts, hygiene and sanitation in clinical and community settings, prescribing norms and diagnostic capacity, and the way that the markets for supply of antibiotics function and are guided by regulatory mechanisms.

Time for multi-level governance with actions and accountability!

In 2015, the World Health Assembly agreed to adopt the Global Action Plan on Antimicrobial Resistance (including Antibiotic Resistance). In 2016 the UN General Assembly affirmed the commitment to the Global Action Plan. To match this global leadership, each region and country must now devise intersectoral National Action Plans which are appropriate to specific country contexts.

References

Acknowledgements
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