

Report

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UNIVERSAL HEALTH COVERAGE (UHC) IN AN ERA OF ANTIMICROBIAL RESISTANCE (AMR) AND PANDEMICS

This report provides a summary of the conclusions of the High-Level Meeting on “*Universal Health Coverage (UHC) in an Era of Antimicrobial Resistance (AMR) and Pandemics*” held in Tokyo on 21-22 February 2023. The participants included public and private sector experts from a number of countries in Asia and Europe, including the European Commission, working on different aspects of the response to antimicrobial resistance. The aim was to identify priority actions for the next steps in addressing this global public health challenge. The participants recognised the importance of a One Health Approach, but this meeting focused on human health and health services.

Since the discovery, development and widespread use of antibiotics during the second half of the 20th Century, the burden of infectious diseases has fallen dramatically, and life-expectancy has risen. We have increasingly taken this achievement for granted. As the use of antibiotics has risen, micro-organisms have developed resistance to them – a natural phenomenon. In a landmark study published last year, it was estimated that globally in 2019 the deaths of 5 million people were associated with resistant bacterial infections. If action is not taken to address this problem, the number of deaths is projected to rise.

The COVID pandemic demonstrated the degree to which all countries are interconnected. Resistant bacteria also spread rapidly within and between countries. That is why efforts to mitigate the challenge of future pandemics should include AMR. This will require a renewal of national and global efforts to strengthen national health systems and ensure equitable access to health services during the preparedness, response and recovery phases of health emergencies. The COVID pandemic also illustrated the amount of effort and public resources required to ensure the development of and provision of equitable access to, effective diagnostics, vaccines and therapeutics. Addressing the global public health threat of AMR requires a similar level of political and financial commitment by the global community.

Many countries have formulated national action plans to address AMR. However, due to lack of political commitment, technical capacity and financial resources, only a minority have reported progress with implementation. The focus now needs to be on actions at multiple levels to: 1) invest in strengthening health systems for making progress towards UHC; 2) build capacity to prevent, diagnose and treat infections in a manner that maintains the efficacy of existing antimicrobials; 3) set up AMR and AMU surveillance systems in the outpatient and inpatient sector; 4) invest for the longer term on the development of cost-effective diagnostic tools and novel antimicrobials.

One way to accelerate implementation will be to move beyond a siloed approach for meeting global health challenges and integrate the response to AMR with global and national efforts to make progress towards UHC and build resilience to possible future pandemics.

Governments need to recognise the inter-relationship between national and international efforts to achieve UHC and to reduce the risk of AMR. A number of countries, including Japan, Thailand and Sweden, have established health systems that provide access to effective health services for all. They have dramatically reduced the burden of infections through effective prevention, diagnosis and treatment. It is

important that these strategies for increasing access to healthcare also take into account the need for interventions to reduce the risk of the emergence of AMR. **This requires an incorporation of an awareness of AMR into all aspects of health system strengthening.** This includes the following: ensuring that health facilities meet infection prevention and control (IPC) standards; ensuring that there is adequate WASH infrastructure in healthcare facilities; requiring health insurance to cover AMR-relevant interventions including the use of diagnostic tests and monitor the appropriateness of antibiotic use; strengthening bacteriology and mycology laboratories; strengthening infectious disease surveillance capacities and ensuring that health workers receive adequate in-service and pre-service training on IPC and AMR. It is also important to establish appropriate regulation of antibiotic use and ensure that the general public understands the challenge of IPC and AMR. Countries will need to ensure strong political commitment and adequate funding to strengthen their health systems and tackle AMR. Some low- and middle-income countries may also need supplementary external financial support to reduce the disease burden in their population and build the capacity of their health system to address AMR. This will require global financial commitments.

The capacity to develop new antibiotics has been decaying for years. Present market arrangements do not provide adequate incentives for the development of new antibiotics. Many large pharmaceutical companies have stopped research and development of antimicrobials and many smaller ones have gone bankrupt, despite bringing promising new drugs to market. The clinical pipeline is very thin. There is little incentive for young academic scientists to enter this field. There is a danger that a tipping point could be reached that could leave a dangerous void in capacity.

The experience of the response to COVID has demonstrated how new publicly-funded scientific approaches have made possible the rapid development of medical countermeasures. The challenge of developing new antibiotics requires additional training and scaling up of academic scientific capacity, and appropriate incentives for pharmaceutical companies to develop new products and conduct late-phase clinical development and clinical trials in order to achieve regulatory approval and take products to market. This will require fully funded public-private partnerships that can steer, coordinate and accelerate the pipeline towards unmet medical needs, and shape the market to encourage private investors to support the discovery and development of new antimicrobials.

A number of initiatives, such as CARB-X, GARDP and the AMR Action Fund, have been launched to create a global architecture to address the problems outlined above. They combine “push” and “pull” incentives. The push incentives focus on reducing the costs of conducting research to develop new antimicrobials. This includes support for the identification and evaluation of promising new products, their development for regulatory approval and, ideally, support for optimal and appropriate clinical use. It also could include the training of scientific and clinical researchers, including in countries with high AMR burden. The pull incentives focus on ways for health services to increase the reward for the approval and commercialization of new antimicrobials, even if they are kept in reserve. One example from the UK is the use of subscriptions, whereby the health service makes an annual payment for the right to use a newly developed antimicrobial. **These R&D initiatives have generated a substantial body of experience on effective investment and coordination.** Policy-makers, especially from



higher income nations, should review this evidence, and if feasible, fund these initiatives to take them to scale in their countries.

National action plans to address AMR need to include measures to both prevent, diagnose and treat infections, while reducing the risk of AMR, and develop new antimicrobials, if the countries have the necessary technical and financial means. Maintaining the efficacy of existing antibiotics is a global public health good. Our civilization will be in danger if we lose the battle against AMR. This will therefore require international cooperation to shape global markets for antimicrobials. Prudent use of the existing antibiotics using diagnostics, surveillance, and increased awareness and education is a responsibility for all countries. Procurement of quality-assured existing antibiotics and generics can be supported through longer term forecasting of needs; this will help meet supply demands, help avoid stockouts, develop new and quality-assured production facilities, and ensure optimal pricing. Measures are needed to agree on

priorities for investment in research and development of novel antibiotics (e.g. through WHO Priority Pathogens List) and to meet public health needs, based on evidence on the emergence of new strains of resistant organisms. They will also need to agree on the location of the capacity to develop and manufacture new antimicrobials and on the access including stewardship arrangements to ensure that new products are used appropriately. This is an important challenge for the G7 and G20 and could also be raised at the World Health Assembly.

Effective national and global efforts to address AMR will require leadership in the

creation of partnerships for change. It is important to build understanding amongst political leaders of the contribution that antimicrobial drugs have made to the big improvements in health since the middle of the last century and of the importance of measures to maintain these improvements for future generations. **Strategies for addressing the AMR challenge will need to put the needs of people at the centre.** They will need to recognise that AMR emergence and spread is facilitated by the barriers faced by people in accessing quality health services, and critical gaps in the health systems (*Refer to Table 1*).

Addressing AMR through a health system strengthening approach: 6 focused areas

- 1) Enhanced governance,
- 2) Surveillance of AMR and Antimicrobial consumption and use for patient care,
- 3) Prevention of infections through enhanced infection prevention and control measures, including WASH and immunization,
- 4) Access to basic health services, including health insurance coverage for AMR interventions,
- 5) Access to enhanced and quality laboratory services for bacteriology and mycology testing, and
- 6) Access to quality-assured and appropriate treatment and care.

Table 1 - Addressing AMR through a health system strengthening approach: 6 focused areas

Effective implementation of AMR national action plans will require the full engagement of different sectors and stakeholders. These include health workers and their professional bodies, regulatory agencies, civil

society organizations, patient advocates, the links in pharmaceutical value chains, academic and research institutions, and the managers of public and private health facilities. It is also important to involve communities and their representatives in the AMR Coordination Committees to ensure that strategies for addressing AMR are inclusive, take local needs into account and “leave no one behind.”

It will be important that the global community take a systematic approach for addressing the challenge of AMR. This will involve ensuring that the challenge of resistant bacterial infections and of AMR is aligned with and included in global efforts to achieve UHC (UHC Partnership, UHC 2030) and global efforts to address global health security (IHR revisions, revising the health emergencies and pandemic response architecture, the pandemic treaty, the pandemic fund). It will also involve incorporating measures to address AMR in the outcome documents of the UNGA High Level Meetings on UHC, on tuberculosis, on Pandemic Prevention, Preparedness and Response, planned for 2023 and linking them with the UNGA High Level Meeting on AMR for 2024. The G7 and the G20 can play an important role by providing political commitment, and firm financial commitments for building the capacity of countries to enhance AMR-relevant components of their health systems, and for innovation, research and development of new antimicrobials and modalities for their distribution. Leadership of the G7 and G20 will be essential for building stronger collaborations between various stakeholder organizations, and to ensure a coordinated approach for addressing this global health challenge.



Key messages and action points

- The meeting agreed on the importance of recognising the linkage between AMR, UHC and PPR. Global coordination and collaboration are needed to streamline actions and avoid duplication of effort at the country level.
- Efforts to increase awareness of AMR and its role as a disruptor of efforts to achieve UHC and PPR strategies will help build political support at all levels. Governments need to establish coalitions for change based on available evidence, by highlighting the adverse humanitarian and economic impact of AMR, and by supporting a participatory and inclusive approach for engaging all relevant stakeholders in the response to AMR at the community, national and global level.

- The problem of AMR is global and requires a global response that takes into account health inequities. Governments need to take the lead in establishing a global governance and financing mechanism to ensure equitable access to basic health care, including surveillance, prevention, diagnosis and treatment for resistant infections. In low- and middle-income countries, this may require additional financial and technical support from the global community.
- Adequate funding is needed to empower existing R&D public-private partnerships to support and coordinate the development of and provision of access to new antimicrobials, in particular supporting preclinical development in order to replenish a clinical pipeline which is unanimously considered to be too thin and to support the acceleration of late phase development to access for patients. Governments will need to play a key role in ensuring that investments take public health needs into account. It will be important for countries to coordinate actions in building a global capacity for scientific research, for the development and manufacture of antimicrobials, and for providing longer-term forecasting of antibiotic needs to ensure consistent supply of quality-assured generics.
- WHO expressed its interest in working with ASEF and WHO Collaborating Centres in Sweden and Japan to provide technical assistance to 6 ASEM Partners Countries in 2023 – 2024 to strengthen AMR-relevant interventions within their health system strategies through a people-centred approach for addressing AMR in the human health sector.

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