ACT

AFRICA COALITION ON TUBERCULOSIS

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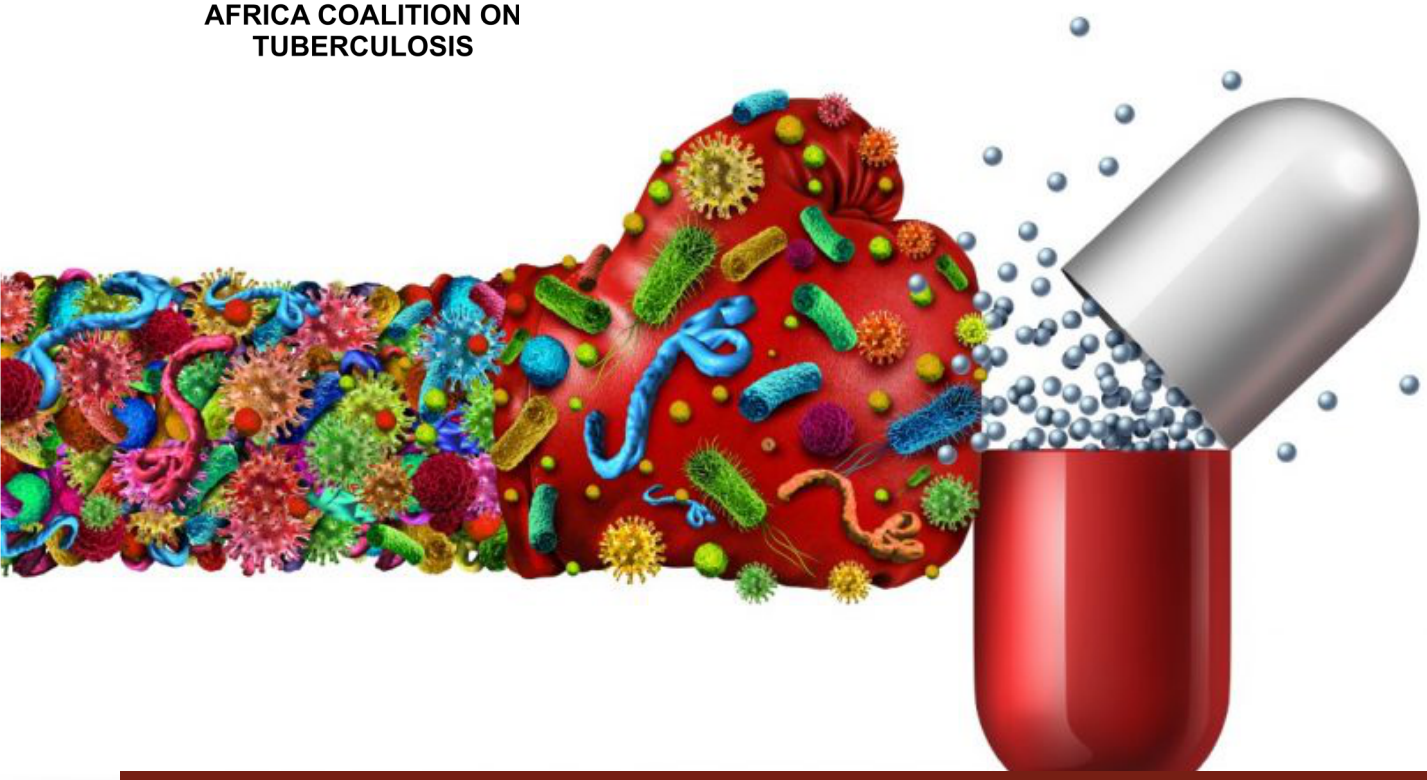
Communities in Pandemic Preparedness & Response



Building Community Knowledge for Effective Pandemic Preparedness and Response (PPR) and Antimicrobial Resistance (AMR)

Communities Engaging in AMR

1. Introduction

Antimicrobial resistance (AMR) is a condition that poses significant danger to human health and has been identified by the World Health Organisation as one of the top ten global health challenges. Whilst AMR has been present for a long time, its prevalence has grown significantly over the last few decades.

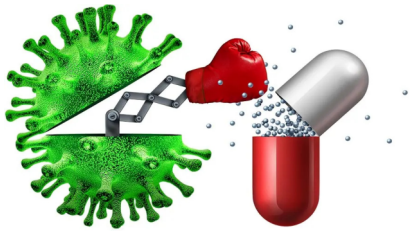
This guide is targeted at civil society for building capacity on the AMR pandemic, and how to get involved in the response. Civil society involvement in the AMR response is essential at this point in time given the scale and impact of the pandemic. Recent statistics show that AMR is now responsible for more deaths than some of the current global pandemics, including HIV, TB and malaria. In 2019, for instance, AMR was the cause of an estimated 4.95 million deaths, whilst HIV and TB caused an estimated 690,000 and 1.42 million deaths respectively in the same year. Malaria resulted in an estimated 409,000 deaths in the same year. AMR is therefore a global pandemic of concern which requires an urgent and sustained global response, and civil society should be involved.

2019

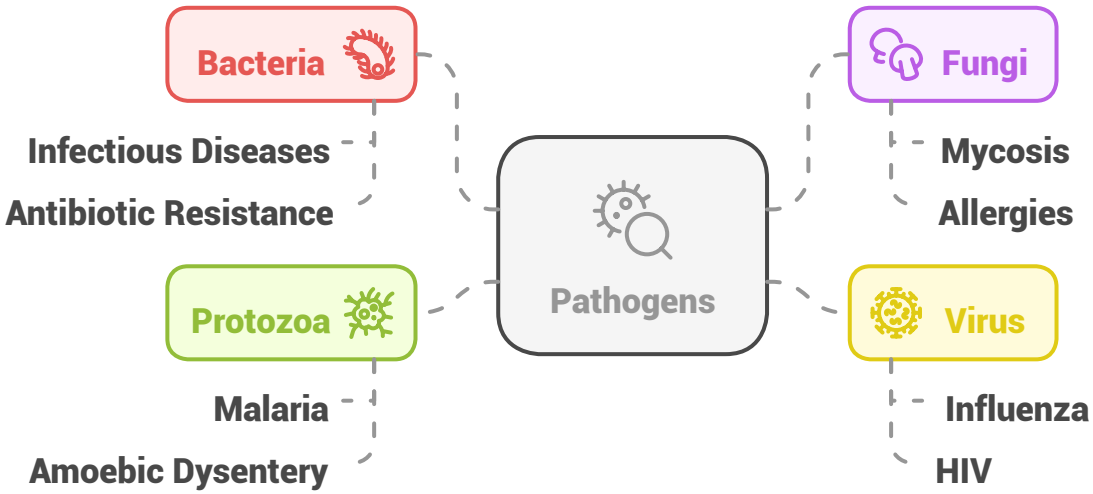
AMR Estimated **4.95 million deaths**	**HIV** Estimated **690,000 deaths**
TB Estimated **1.42 million deaths**	**Malaria** Estimated **409,000 deaths**

2. What is Antimicrobial Resistance?

Most diseases are caused by harmful microscopic organisms or microbes called pathogens which infect humans, plants and animals. These pathogens include bacteria, fungi, viruses and protozoa (or parasites).



Pathogens and Their Roles in Disease

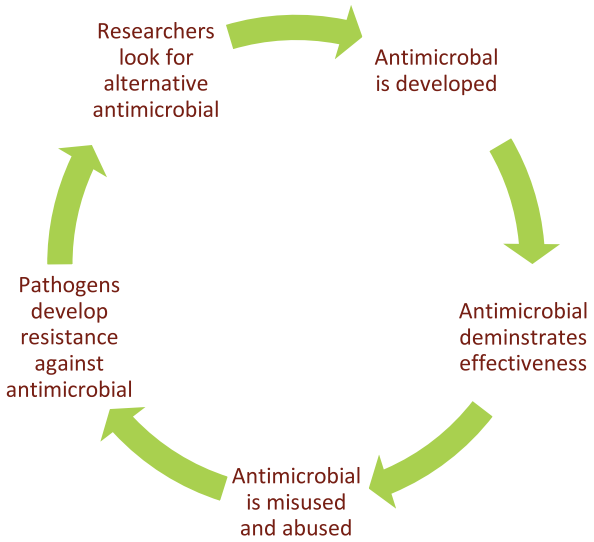


In order to treat infections, science has developed antimicrobials, which include medicines, to either kill or neutralise pathogens. This is achieved mainly by either disrupting or preventing the mechanism of action of the pathogen, killing the pathogen outright or preventing its reproduction. With time, many pathogens develop mechanisms which render antimicrobials ineffective. This is what is called antimicrobial resistance. This happens when pathogens are able to exist or thrive in the presence of antimicrobials which were previously effective in either killing or neutralising their effect.

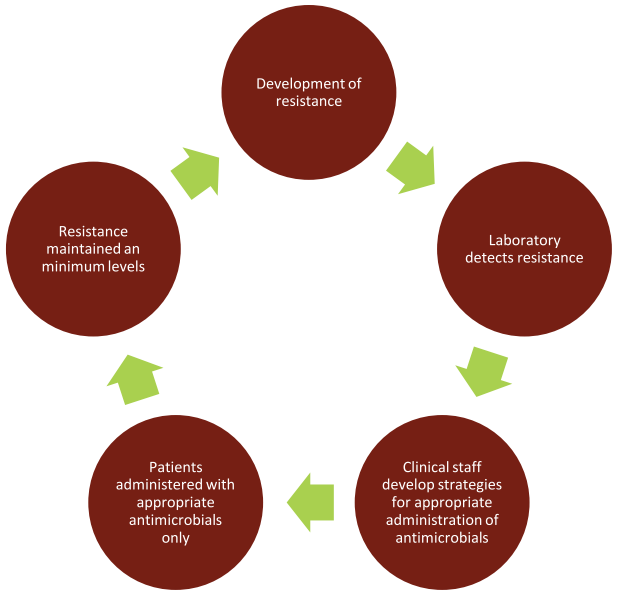
3. How does Resistance develop?

Development of Resistance

Resistance develops through a number of strategies that are created by pathogens. The main strategy consists of pathogens changing their structure in a process called mutation, and this is usually caused by the misuse, abuse and overuse of antimicrobials. Once resistance develops, a person will not be cured by taking medicine to which the body is resistant. It must be noted that resistance can also be a natural process which has been in existence for thousands of years. Consequently, it cannot be completely stopped, but can be controlled through strategies such as prudent use of medicines, including reducing pressure on common antimicrobials, education and awareness and antimicrobial stewardship.



Cycle of antimicrobial development and resistance caused by misuse and abuse of antimicrobials



Minimising spread of resistance through appropriate use of antimicrobials

The above graphic acknowledges that resistance will always exist, and one of the most effective strategies to contain it is to ensure that patients are administered with antimicrobials which are effective against the diseases or infections they would be suffering from. To achieve this, the laboratory system should have the capacity to detect any resistance as well as determine the antimicrobials that are effective against the causative pathogens.

This strategy eases pressure on the indiscriminate use of common antimicrobials which are used for a range of infections (especially broad-spectrum antibiotics), which is one of the main causes of the development of resistance.

3.1 One Health concept

AMR is a different pandemic as it is affected by the human, animal, agricultural and environmental sectors. Humans and animals, including birds, share a number of diseases as well as antimicrobials, and the process of transfer of such diseases is called "zoonosis". Some antimicrobials that are used by humans can also be used in the animal and agriculture sector, and resistance can then develop in plants before being transferred to humans.

An illustration of the One Health Concept

In recognition of this interconnectedness between the sectors in the development and transmission of AMR, the One Health concept has been used to address the pandemic. This is as a collaborative, multisectoral, and transdisciplinary approach which recognises the interconnection between people, animals, plants, and their shared environment. In addressing AMR, the United Nations has created the Quadripartite, a collaboration between the WHO which represents the human health sector, WOAH which represents the animal health sector, FAO which represents the agriculture sector, and UNEP which represents the environmental sector.

3.2 Development of resistance in HIV, TB and Malaria

HIV, TB and malaria are some of the largest pandemics in recent history. Whilst HIV is a virus, TB is caused by bacteria, and malaria is caused by protozoa (or parasite).

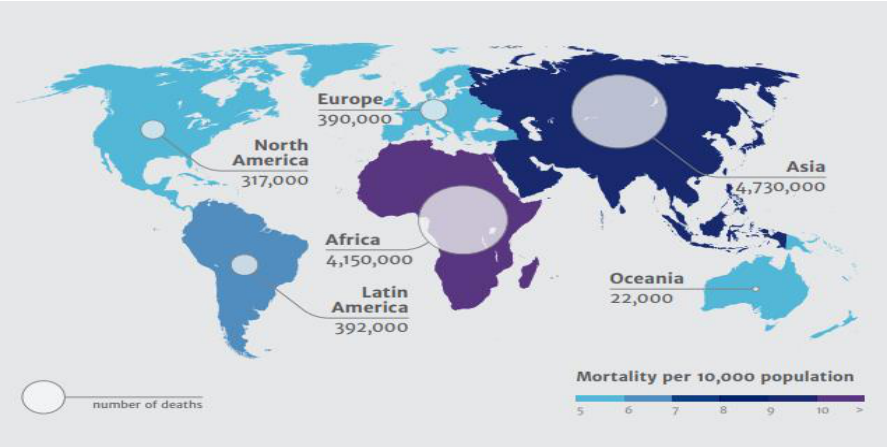
HIV is controlled through antiretroviral therapy (ART) which has saved millions of lives which would otherwise been lost to related infections. Unfortunately, resistance in antiretroviral medicines has become a major challenge. This includes an antiretroviral called dolutegravir which had initially shown that it was effective against resistance. However, recent evidence shows a resistance level of up to 19.6%. Resistance to antiretrovirals compromises the effectiveness of the treatment.

Drug resistant TB has become a major health menace which threatens the global efforts to eradicate the disease. In recent years, multi-drug resistant TB (MDR-TB) and extensively drug resistant TB (XDR-TB) have emerged, and these conditions require specialised treatment and tailored treatment regimens.

Malaria is another pandemic which affects a number of countries in all the five continents. Initially, effective treatment was through chloroquine-based medicines, and resistance eventually developed resulting to a switch to a different treatment regimen. Unfortunately, and malaria has started to develop resistance against the new regimen as well.

3.3 Impact of AMR as a global health pandemic

The impact of AMR on global health has not been fully assessed but current data shows that the pandemic has the potential to significantly impact on global mortality and morbidity, as the combined economies of the world.



4 What community aspects of AMR fit into Resilient and Sustainable Systems for Health (RSSH)?

Some of the actions that can be taken by countries and regions in order to minimise the development and spreading of AMR include the following:

Foundational step; Effective governance, awareness and education

Engage civil society and communities in the multisectoral AMR coordination mechanism and in development and implementation of the One Health nap on AMR

Foundational step; Strategic information through surveillance and research

Work together with civil society organizations in the collection of data on AMR or AMU in the community

Appropriate, quality-assured treatment

Work together with civil society organizations in the collection of data on AMR or AMU in the community

Prevention

Develop and deliver awareness-raising materials on AMR, immunization, clean water and hand and food hygiene

Access to essential health services

Ensure the availability and affordability of preventative, testing and counselling services for common infections

Timely, accurate diagnosis

Communicate the importance of timely, accurate diagnosis of suspected infections

Aspects of RSSH aligned to the AMR response

Some of the actions that can be taken by countries and regions in order to minimise the development and spreading of AMR include the following:

4.1 Effective governance, awareness and education

Civil society should be included within the national AMR governance structures in order for its involvement is to be effective. The national governance structures of every AMR program are outlined in the AMR national action plan.

Civil society should also engage in AMR awareness and education in order to, among other outcomes, achieve behaviour change among health workers and communities. Community education can be targeted at issues such as appropriate use of medicines which should discourage communities from buying antibiotics over the counter or from informal markets, encourage patients to seek treatment from registered and licenced health workers, and ensuring that prescribed medicine is administered in full to avoid patients stopping medicine regimens when they feel better.

4.2 Strategic information through surveillance and research

Surveillance entails the continuous collection of health data, analysing it and interpreting it to determine trends within the public health sector. This helps in the detection of pathogens, and this will be followed by a response. The laboratory sector is heavily involved in surveillance through the use of diagnostics to detect and identify pathogens. Through the science of epidemiology, disease patterns can be studied, and these activities help health systems to detect and track disease outbreaks and epidemics, and provide solutions to addressing them.

These data are critical in the AMR response as they enable the health system to identify sources of infection and tackle them in real time. Globally, laboratory systems within the One Health sector are obliged to routinely collect data on resistance and store it in national databases. Some countries submit these data to international databases, and an example is the Global AMR and Use Surveillance System (GLASS) developed by the WHO. The database hosts national data on AMR, antimicrobial consumption and antimicrobial administration.

4.3 Scaling up health workforce capacity

Pandemics that are caused by new pathogens will require treatment regimens and care that might be different from what the health workers are used to. It is important that the system be robust enough to ensure that health workers are trained in real time on the new standards of treatment and care. In the case of AMR, healthcare staff need to be trained on various aspects of the AMR response, including infection prevention and control, and antimicrobial stewardship.

The WHO has issued a guidance for countries on antimicrobial stewardship where the critical steps and actions are outlined.

4.4 Appropriate Quality Assured Treatment

Within the healthcare system, it is essential that there be an uninterrupted supply of quality-assured, essential health products for the prevention, diagnosis and management of infectious diseases. This objective requires the systems to put in place mechanisms for approving medicines, vaccines, diagnostic machines and other health products, as well as procurement systems which are able to make them available as and when needed.

Administration of medicines must be based on appropriate use where only the appropriate medicines are administered to patients. A global system has been put in place where medicines are classed in three categories, ranging from those that are easily available to patients, and ending with those that should only be administered through skilled health workers.

4.5 Prevention

Communicable diseases are capable of being contained to prevent them from spreading to other people. For instance, simple strategies such as availability of water and hygiene facilities, waste management systems, hand hygiene and vaccination/immunisation can prevent the spread of some diseases.

Within the HIV pandemic, for instance, effective strategies included sexual abstinence, faithfulness in sexual relationships and condom use. AMR proliferates in health centres where patients congregate, hence strong infection prevention and control (IPC) measures need to be put in place.

4.6 Access to essential health services

The health system is made up of several units and processes which work together seamlessly to ensure the highest standard of healthcare for patients. The functions of each unit feeds into one or more other units, hence the need for integration and efficiency within the broader healthcare system.

Services such as procurement of essential medical commodities, diagnostics, quality treatment and prevention services all work towards providing holistic quality care for patients. Due to its complexity, AMR requires access to a number of essential health services for the response to be successful.

4.7 Timely accurate diagnosis

AMR is unique in that it does not manifest any symptoms, and the only way it can be detected is through laboratory analysis. Besides confirming the presence of resistance, the laboratory results will show which antimicrobials are effective for the tested patient.

The availability of antimicrobial sensitivity testing (AST), which detects both sensitivity (or effectiveness) and resistance is essential in the healthcare system to ensures that health workers are guided accordingly in their treatment of patients, and that patients are aware of their status with regards treatment and prevention choices. Resistance data feeds into national databases and allows policy makers with data on the appropriate response to AMR.

5. How can civil society get involved in the AMR response?

In order to get involved in the AMR response, civil society needs to do the following, among other approaches:

- Gain knowledge and capacity on AMR in order to be able to engage communities and health workers in education and awareness. This also helps with developing messages around AMR.

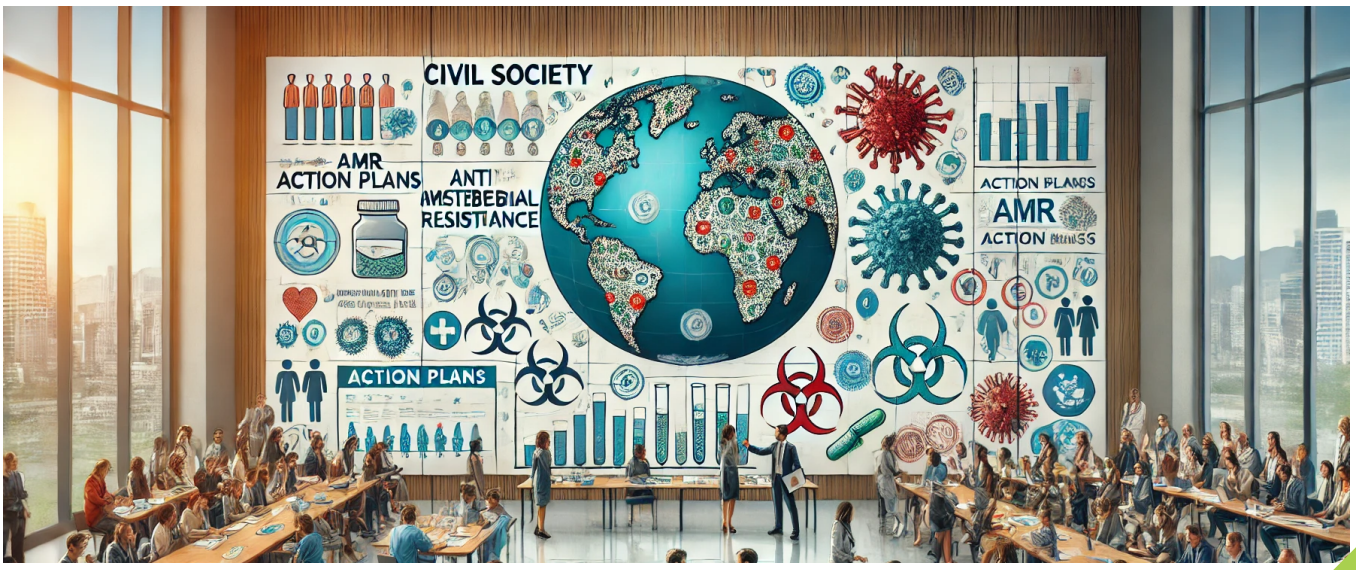
- Analyse government commitments at national level, including the AMR national action plans, the strategic priorities and commitments in the plans and the implementation timelines.

- Getting an understanding of the AMR governance structures at national level including the core group/governance committee, technical working groups and other structures involved in the governance and/or implementation of the AMR programs.

- Identify the status of implementation of the AMR strategic priorities in the AMR national action plan and map any successes, gaps and opportunities.

- Analyse all relevant international commitments made on AMR including the UN Political Declaration on AMR, the Africa Common Position on AMR, the African Union Framework for AMR Control 2020-2025, the 2022 Muscat Ministerial Manifesto on AMR and the commitments to be made during the upcoming 4th High Level Ministerial Conference on AMR scheduled for Riyadh in November 2024.

- Identify spaces for civil society involvement and advocacy in the national and international spaces and commitments.



6. Some suggested advocacy strategies for communities

A number of follow up advocacy strategies can be implemented by civil society organisations, and these include the following:

- Getting a thorough understanding of the AMR pandemic in order to create a civil society position on the pandemic. A detailed and intense treatment literacy program on AMR will be necessary to get an understanding of these aspects of AMR.

- Getting involved in the national and international AMR response would be important for civil society to have a voice and contribute to the direction of the response. There are spaces for civil society to be involved in the response, and these must be used to bring in the voice of communities as well as monitor the level of implementation. It is also critical to develop positions on various aspects which will be supported by evidence.

- Awareness raising is an activity which is integral to the AMR response given the very low levels of awareness among communities, and this is a strategy that has been successfully used by civil society in past pandemics. This can be done through developing information materials for dissemination through in-person, electronic and other media.

- Onboarding AMR into current community led monitoring (CLM) programs is a low hanging fruit for civil society. AMR-relevant indicators can be added to existing CLM tools. Identified gaps will be brought to the attention of national AMR structures for corrective measures. The data and information collected through CLM can also help shape the trajectory of the response.

- The World Antimicrobial Resistance Awareness Week (WAAW) is commemorated between the 18th and 24th of November annually. The theme of the annual commemorations and related materials are posted by the Quadripartite online. This is an opportunity for civil society to spread awareness on AMR amongst their target communities and engage with national AMR structures on the national response.

- At the international level, it is important for civil society to create a broad-based movement on AMR which will influence the response at that level. Due to the international nature of the pandemic, any advocacy by civil society must target the local to the international levels. There are a number of spaces available for civil society at the African Union, United Nations, Quadripartite and research levels.

7. Using the UN political declaration on AMR for accountability advocacy

The UN Political Declaration on AMR which was approved in September 2024 is the most comprehensive international commitment on AMR yet. The 2024 political declaration can be used by civil society for accountability advocacy using a number of strategies.

7.1 Civil society mentions in the political declaration

- In Article 29 under the broad topic of Governance, governments undertook to adopt an inclusive approach to health governance at all levels by involving all relevant stakeholders including civil society in the design, implementation and review of AMR national action plans.

- In Article 88 under the topic Research and Development, Training, Innovation and Manufacturing, governments committed themselves to involving civil society in the process of improving the availability, affordability and efficiency of medicines, vaccines, diagnostics and related commodities.

- In Article 103 under the topic Follow Up, governments undertook to request that the Quadripartite organizations to collaborate with civil society in providing technical support to countries on the AMR response.

These commitments should enable the civil society sector to identify the named spaces and utilise them for engagement, involvement and advocacy.

7.2 Other Important Commitments

- In Article 16, the governments committed themselves to reducing the global deaths associated with bacterial antimicrobial resistance by 10% by 2030 against the 2019 baseline of 4.95 million deaths. Civil society organisations can demand that individual governments establish baseline national AMR-related mortality through intensive surveillance, as well as outlining the actions necessary to reduce AMR-related mortality.

- In Article 30, governments committed to ensuring that 100% of the countries have developed or updated multisectoral AMR national action plans with national targets that are being implemented, with inclusive and effective national functioning multisectoral coordination mechanisms, and sustainable human and financial resources. Civil society can monitor all aspects of this commitment and ensure that any identified gaps are addressed in real time.

- In Article 34, governments committed to ensuring sustainable financing and budgeted activities, as identified in the AMR national action plans, for their effective implementation, in accordance with national contexts. Civil society can monitor and track budget allocations to identified strategic priorities in the AMR national action plans, and also monitor implementation of activities where funding has been availed.

- In Article 62, governments committed to ensuring that minimum requirements for infection prevention and control programmes in healthcare facilities are in place through strategies which include ensuring that 100% of healthcare facilities have basic WASH and waste services by 2030. Implementation of this commitment can be monitored by civil society through community led monitoring, and governments should be held accountable to drawing up phased plans to achieving these set goals.

- In Article 100, governments committed themselves to improving access to diagnosis and care, so at least 80% of countries can test resistance in all bacterial and fungal GLASS pathogens by 2030. Civil society should demand for the development and adoption of national essential diagnostics lists, the procurements of the identified diagnostics by governments and their deployment at all levels.

7.3 Other Important Commitments

- At the international level, governments committed themselves in Article 36 to facilitating sustainable funding from international cooperation to support the implementation of national action plans on antimicrobial resistance, with the target of achieving US$100 million to catalyse the achievement of at least 60% of countries having achieved funded plans by 2030. Civil society can utilise existing structures such the Global Fund Advocates Network, to network with international donors to mobilise support for the optimal funding of the AMR response.

1. Murray CJL et al, Global burden of bacterial antimicrobial resistance in 2019: A systematic analysis, The Lancet, Volume 399, Issue 10325, 629 - 655
2. UNAIDS, UNAIDS Data 2020, online at: https://www.unaids.org/sites/default/files/media_asset/2020_aids-data-book_en.pdf
3. World Health Organisation, Global Tuberculosis Report 2020, online at: https://www.who.int/publications/i/item/9789240013131
4. World Health Organization, World Malaria Report 2020, online at: https://www.who.int/publications/i/item/9789240015791
5. WHO, Antimicrobial Resistance: https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance
6. CDC, About antimicrobial resistance: https://www.cdc.gov/antimicrobial-resistance/about/index.html
7. WHO, HIV drug resistance: https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/hiv/treatment/hiv-drug-resistance
8. WHO, New report documents increase in HIV drug resistance to dolutegravir: https://www.who.int/news/item/05-03-2024-new-report-documents-increase-in-hiv-drug-resistance-to-dolutegravir
9. WHO, types of drug resistant TB: https://www.who.int/teams/global-tuberculosis-programme/diagnosis-treatment/treatment-of-drug-resistant-tb/types-of-tb-drug-resistance
10. WHO, Malaria: Artemisinin resistance: https://www.who.int/teams/global-tuberculosis-programme/diagnosis-treatment/treatment-of-drug-resistant-tb/types-of-tb-drug-resistance
11. Jim O'Neill 2014 Report on the Review of AMR: https://amr-review.org
12. WHO, Future surveillance for future epidemic and pandemic diseases: A 2023 perspective: https://iris.who.int/bitstream/handle/10665/374992/9789240080959-eng.pdf?sequence=1.
13. WHO, Global AMR and Use Surveillance System: https://www.who.int/initiatives/glass
14. UNICEF, How to improve primary healthcare to prepare for future pandemics: https://www.unicef.org/stories/how-to-improve-primary-healthcare-to-prepare-for-pandemics

Useful AMR materials

- WHO, People-centred approach to addressing antimicrobial resistance in human health: https://iris.who.int/bitstream/handle/10665/373458/9789240082496-eng.pdf
- AMR Global Action Plan: https://www.who.int/publications/i/item/9789241509763
- Jim O'Neill 2014 Report on the Review of AMR: https://amr-review.org/
- Jim O'Neill 2016 Report on the Review of AMR – Tackling AMR Globally: https://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf
- United Nations 2016 Political Declaration on AMR: https://digitallibrary.un.org/record/842813?ln=en&v=pdf
- Muscat Ministerial Manifesto on AMR: http://www.amrconference2022.om/MuscatManifesto.html
- WHO Library of AMR National Action Plans: https://www.who.int/teams/surveillance-prevention-control-AMR/national-action-plan-monitoring-evaluation/library-of-national-action-plans
- WHO, AMR Diagnostic Initiative: https://www.who.int/publications/i/item/9789240072015
- United Nations 2024 Political Declaration on AMR: https://www.un.org/pga/wp-content/uploads/sites/108/2024/09/FINAL-Text-AMR-to-PGA.pdf

Useful AMR resources

- An introduction to the people-centred approach to addressing AMR in human health (online course): https://openwho.org/courses/AMR-people-centred-approach
- AMR and the Environment: Key concepts and interventions (online course): https://openwho.org/courses/amr-environment
- Fleming Fund AMR Online Course: https://www.flemingfund.org/publications/fleming-fund-online-amr-course/
- FAO E-learning Academy – Understanding AMR in food and agriculture: https://elearning.fao.org/course/view.php?id=783

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