



## **WORLD HEALTH ORGANISATION (WHO)**

*“Combating resistance and ensuring equitable access to antimicrobial drugs.”*

## Letter From The Director

Dear Delegates,

Welcome! My name is Ishaan Kejriwal, and it is my pleasure to introduce you to BDMUN! I have the privilege of chairing an exciting and fascinating committee - the World Health Organisation. This is a committee that I am truly passionate about, and I hope that you all begin to share my enthusiasm as our time together begins.

My goal is to stimulate interesting debate, compelling questions, and unforgettable gestures that will undoubtedly make our committee one to remember. Apart from MUN, my passions lie in photography, football and music. Trying to balance guitar lessons with photo expeditions, I always seem to make time for MUN - solely because of how much I learn and develop as debater with every new conference. As your director, I expect you all to be well-informed on the agenda of this committee, as well on our country's stance. Also, remember that the most crucial element of your preparation for this conference is research! As you must have been told on multiple occasions, no amount of research is ever enough.

Additionally, I urge you to carefully examine this study guide, as it contains essential information that will help you understand the topic comprehensively, and give you an idea of what should be discussed in committee. I hope to witness courageous actions, bold statements,

and most importantly - creative and innovative solutions. Remember delegates, it is collaboration that allows us to combine diverse perspectives and create effective solutions and a global scale.

For me, MUN goes above and beyond debate and diplomacy. Not only is it a unique opportunity to put yourself in the shoes of another nation and formulate your distinctive thoughts and ideas, but it fosters critical thinking, leadership skills, and collaboration that I often find absent in common educational places like our classrooms. The one thing I can assure you, is that you will leave this committee as a more knowledgeable, experienced, and confident person - regardless of your country or its stance. I cannot wait to see the best debater within all of you come to life during our committee sessions, but for now I would like to leave you with a quote that accurately exemplifies my definition of a leader- *“Remember that true leadership lies in our ability to turn dialogue into action and vision into reality.”*

Ishaan Kejriwal

Director of WHO

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## **Letter From The Assistant Director**

Dear Delegates,

I am thrilled to welcome you all to the WHO committee! I would like to begin with a quote by Daniele Vare: *“Diplomacy is the art of letting someone else have your way.”*

As your Assistant Director, I promise to make this MUN experience both productive and memorable for all you delegates. Previously, I had always imagined MUN to be all about making speeches and arguing in suits, but little did I know, my first experience would sweep me up in intense alliances, frantic questioning, and thinking quickly on my feet. I hope to make this experience as enjoyable for you as my first and following experiences were for me.

Since debating has almost always come naturally to me, MUN quickly turned into a passion of mine and I've loved it ever since. I have always enjoyed the entire process - from the research and the rivalries to the crises and the unexpected plot twists. Beyond MUN, I'm interested in psychology and the way the brain works. I'm also a sports enthusiast with a keen love for tennis, football, and running. I like to look at MUN as the ultimate mental sport, something that challenges my mind similarly to how sports do - from anticipating your opponents' moves and adapting quickly to working together with those on your team or your side.

My expectations for the committee are high but quite simple: show up prepared, bring your creativity, collaborate with your delegates, and participate in discussions. For all you delegates, I hope you take this as an opportunity to discover your diplomatic potential and bring about fruitful debate. Lastly, remember that while MUN can be extremely intense, it's also an experience to enjoy. Don't be afraid to add some humour and connect with your friends or make new ones, but please also maintain propriety at all points of time.

I hope to make this committee a place for powerful discussions, unique revelations, and shared laughs. May the best delegate win, but may the boldest ideas and most unexpected alliances make it a truly memorable conference to remember!

Ananya Dalal

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## Letter From The Assistant Director

Dear Delegates,

It is my pleasure to introduce you to this year's WHO committee taking place at BDMUN. My name is Hridayy Agarwal, and I will be your Assistant Director for these enthralling three days of debate. The topic for our committee this year has very high relevance to ongoing problems taking place in our world at the moment.

As your Assistant Director, I will ensure to stimulate fruitful and compelling debate and look forward to working alongside you in tackling one of the most pressing and prominent issues taking place today. Apart from MUN, my interests lie mainly in football, gaming and reading.

I look at MUN not just as a debating session, but an environment where you learn about several global issues taking place in the world currently along with different perspectives and solutions

from different people. By putting yourself in your delegation's shoes, despite agreeing with its stance or not, it provides you the perfect opportunity to showcase your research skills, leadership skills, collaboration skills and critical thinking.

In the coming weeks, I urge each and every one of you to thoroughly examine the study guide which will essentially provide you with all the introductory pointers that ultimately help guide you in formulating your research further and deeper along with what is expected in committee. Please remember, the point of a MUN conference is not to simply criticise and blame other delegations for what they might be doing wrong, but to provide innovative and effective solutions which will help tackle this issue in the best way possible.

It is not the loudest and most controversial delegation that prevails, but the ones with the most creative and constructive solutions, along with having the boldness, courage and confidence to speak it aloud and influence others. Additionally, I would like to put a large emphasis on research, as that is the most important part in preparing for this conference.

I hope to come across interesting and intense discussions throughout this committee along with bold statements and thoughtful alliances. Together, let's make this conference a memorable experience filled with meaningful debate, collaborative solutions and tons of amusement at the same time. I would like to leave you with an insightful quote by John C Maxwell: *“A leader is one who knows the way, goes the way, and shows the way.”*

Hridayy Agarwal

Assistant Director of WHO

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## Index

1. Mandate
2. Efforts Of WHO
3. Overview Of The Issue
4. General Agenda
5. Past Action Taken
6. Ideas To Consider
7. Recommended Reading
8. Questions A Resolution Must Answer

## Mandate

The World Health Organisation is a specialised agency of the United Nations responsible for international public health. Founded in 1948, it connects nations, partners and people to promote health, keep the world safe and serve the vulnerable. It aims to help everyone, everywhere to attain the highest level of health.

The primary role of WHO is to set international standards and guidelines, monitor and respond to global health issues and disease outbreaks, coordinate international health efforts and provide

technical support to countries and promote research on health issues. WHO plays a key role in addressing global pandemics such as COVID-19 and other infectious diseases WHO was formed on April 7th, 1948 when diplomats met to form the United Nations in 1945 and discussed setting up a global health organisation.

From the 1950's to 1960's they mainly focused on combating infectious diseases like malaria, tuberculosis and smallpox. They accelerated the development of antibiotics and started to advise countries on how to use them responsibly and widen their access to people. They led the Global Smallpox Eradication Program in 1959 which was one of their greatest achievements. Led to eradication of smallpox in 1980. Also inactivated the Polio vaccine in 1952 which almost led to the near-eradication of Polio. From the 1970s to 1980s they focused on improving and educating people on maternal and child health, nutrition and medicines. In 1972 they introduced the Special Programme of Research, Development and Research Training in Human Reproduction to carry out research into sexual and reproductive health and rights.

Due to the epidemic of AIDS rising in the 1980s, they launched the Global Program on AIDS. Between 1990s-2000s WHO tackled problems like AIDS, tobacco use and Non Communicable Diseases. Between 2010s-2020s WHO worked on tackling the Ebola outbreak that took place in West Africa in 2016 with an emergency response. The UN general assembly also adopted a political declaration on antimicrobial resistance (AMR) and called for the establishment of an ad-hoc inter-agency coordination group on antimicrobial resistance to provide practical guidance to ensure global action against AMR in 2016.



In 2020 WHO declared COVID-19 or Coronavirus as a public health emergency of international concern. This led to vaccine development through initiatives such as COVAX and public health measures. However, in 2023, WHO declared an end to the COVID-19 pandemic as a public health emergency. Their current focuses are to achieve the Sustainable Development Goals and battle ongoing problems like climate change, mental health and other infectious diseases.

## Overview Of The Issue

Antimicrobial drugs are produced and designed to kill and prevent the growth of microbes. Classification of these drugs are in accordance to the microbe they work against, including antibacterial drugs/antibiotics (for bacteria), antiviral drugs (for viruses), antifungal drugs (for fungi), antiprotozoal drugs (for protozoa), and antihelminthic drugs (for helminths). Furthermore, these drugs can also be divided into *bacteriostatic*, which prevent bacterial multiplication, or *bactericidal*, which act to kill bacteria. Antimicrobial resistance can be explained simply as a lack of sensitivity to the drug engineered to destroy a pathogen- leading to the increasing incapability of that drug to function effectively over periods of time.

Before understanding how to combat antibiotic resistance, it is imperative to understand the history and origin of its emergence. Considered as one of the most influential discoveries in medical history, few achievements compare to the creation and use of antimicrobial drugs. The earliest and most notable discovery can be traced back to 1928 when Alexander Fleming discovered penicillin. He noticed that mould growing on a petri dish of *Staphylococcus* bacteria was preventing its growth, and in doing so opened the doors to a golden age of antibiotic

discovery. By the 1940s, trials had indicated that penicillin was safe for human use, and showed a revolutionary improvement in survival rates among those infected by staphylococcal infection.

However, the origins of the resistance crisis can also be traced back to 1940, when biochemists reported an alarming discovery of a penicillin-insensitive enzyme produced by the non-susceptible bacteria *Escherichia coli* that could not only break down penicillin, but also hamper its functional capabilities. Researchers understood how the spontaneous and random genetic mutations of the bacterial strain that multiplied, slowly led to resistance.

This event marks the beginning of AMR and its rise to becoming a human health issue. With more antibiotics being developed and subsequently used during the mid-20th century, it was not unlikely that resistant strains would also arise. The world of medicine was being revolutionised with the introduction of treatments for previously incurable diseases, and groundbreaking discoveries such as the first approved antiviral, idoxuridine, being discovered in 1963.

An important driving factor behind the rapid advancement of antimicrobials was to combat resistance strains. For example, methicillin was introduced to combat penicillin-resistant bacteria, but soon after, *methicillin-resistant Staphylococcus aureus* (MRSA) emerged. An “arms race” was slowly developing. New antibiotics were being created, but were soon becoming redundant as a result of evolving and increasingly resistant bacteria, which again required the production of additional drugs.

The rise of resistance can be credited to a number of causes. Resistance occurs in two dominant ways. First, is when a resistant mutation or strain of bacteria replicates, and prevents the antimicrobial drug from reaching its target. The second way is through horizontal gene transfer, which to put simply is when resistant genetic material is shared through physical contact with other microbes. Through the phenomenon of natural selection, when there is more exposure to drugs, the most resistant drugs survive and multiply.

In simple terms, the more we use antimicrobial drugs, the more the chances are that resistant-strains will develop. The reasons for increasing resistance, is a result of widely spread overuse and misuse of antimicrobial drugs in a variety of different ways. Unregulated and widespread accessibility to these drugs enables “self-medication”, where people use them without an approved prescription. Even with prescription, the point at which a prescription is given can vary among patients depending on the healthcare provider, as well as how accurate the identification of the pathogen present is.

For example, an inexperienced professional may prescribe an antibiotic for a viral infection- on which the drug will have no effect. Additionally, not completing the entire course of an antimicrobial, can lead to further resistance. This occurs as some bacteria may still survive, and these are often the strains that have been exposed to the antimicrobial.

They recover, multiply, and spread their resistant traits. The use of poor-quality or substandard antimicrobials is also a contributing factor to AMR, as the drug may contain incorrect doses, where bacteria can survive as they have been exposed only to sub-optimal levels of the

antimicrobial. Prescription as a “preventive measure” without evidence of a drug being necessary, leads to unwarranted use, further improving the chances of resistant-bacteria to grow.

In the mid-1900’s, soon after the discovery of penicillin, humans began using antibiotics in farming. We discovered that animal feed containing antibiotics, could promote faster growth and therefore lead to increased food production. In addition to better growth, antibiotics became important in the prevention of diseases and treatment of infections among livestock as well. Almost mirroring the rise of AMR among humans, the overuse and misuse among livestock constituted an almost identical result among animals.

Unnecessary administration of drugs as a preventive measure, along with more frequent doses in livestock feed, lead to only partial eradication of bacteria - leading to widespread resistance. This resistant bacteria can spread to humans as well, through contamination from manure-based fertilisers, direct contact with animals, and consumption of meat from infected animals

The threats of antimicrobial resistance cannot be understated. The spread of AMR has permitted inefficacy to such a large extent, that it is costing both lives and money. In 2019 for example, AMR was directly responsible for 1.27 million global deaths and contributed to 4.95 million deaths. Killing a minimum of 700,000 people annually, AMR-caused deaths are predicted to rise exponentially with an estimated 10 million deaths yearly, and \$1 trillion in healthcare costs by the year 2050 if action is not taken.

Contamination of food and reduction in agricultural productivity as result of AMR among livestock, will also have consequential impacts. The spread of foodborne disease such as E. coli and Salmonella will increase, in addition to losses of livestock and agricultural output. This will not only hamper the food supply chain, but also expedite economic losses to farmers. This threat is not limited to specific income levels, and is an urgent global issue that will undoubtedly lead to disruption to all aspects of life if not treated with urgency and diligence.

## **Efforts Of WHO**

In May 2015, the World Health Assembly launched the GAP (Global Action Plan) on Antimicrobial Resistance. The main goal of this program is to ensure the treatment and prevention of diseases through quality assured, safe and effective medicines. The plan has five main objectives; to improve awareness and understanding of antimicrobial resistance through effective communication, education and training, to strengthen the knowledge and evidence base through surveillance and research, to reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures, to optimise the use of antimicrobial medicines in human and animal health and to develop the economic case for sustainable investment that takes account of the needs of all countries and to increase investment in new medicines, diagnostic tools, vaccines and other interventions.

Secondly, in 2019, the Food and Agriculture Organisation, World Organisation for Animal Health and World Health Organisation came together to create a pooled fund. This program

reduces the threat of AMR through funding transformative practices and innovative practices that support national governments in achieving the One Health approach which is a unified approach that aims to sustainably balance and optimise the health of people, animals and ecosystems

Additionally, WHO launched World AMR awareness week. The key objective of this awareness program is to improve awareness and understanding of AMR through effective communication, education and training. It takes place from 18-24 November.

As of November 2023, 178 countries have developed the AMR National Action Plan, which is a program aligned with the Global Action Plan(GAP). This initiative aims to ensure sustained progress by countries establishing a multisectoral AMR governance mechanism which is to prioritise activities, develop a cost operational plan and mobilise resources (both domestic and external). Monitoring mechanisms are also needed to track progress, identify upcoming challenges and report on the progress periodically. To globally track the progress in AMR national action plan implementation, countries have committed to completing the multisectoral annual Tracking AMR Country Self-Assessment Survey (TrACSS) that was launched in 2016 where results are published at Global Database for Tracking Antimicrobial Resistance (AMR) Country Self- Assessment Survey (TrACSS)

To address AMR in a pragmatic manner, the people require their needs to be fulfilled such as equitable access to health services in primary care, secondary and tertiary care, and at a national and/or subnational level. Therefore, WHO developed the People centred approach and WHO

core package of interventions, which focuses on preventing infections and ensuring universal access to healthcare services for quality diagnosis and appropriate treatment

The misuse of antibiotics has become very common in present times, with some people in countries “self diagnosing”, without any prescription from a doctor, therefore leading to a higher possibility of the spread of AMR. Due to these ongoing issues, WHO introduced the Antimicrobial stewardship and AWaRe. This program is a systematic approach to educate and support health care professionals to follow evidence-based guidelines for prescribing and administering antimicrobials so that there is no misuse that can lead to further damage.

It will form the front line in safeguarding the effectiveness of antimicrobial medicines. WHO guides countries to develop and implement Antimicrobial Stewardship Programmes as it is one of the most cost-effective interventions to optimise the use of antimicrobial medicines, improve patient outcomes and reduce AMR and health care-associated infections. To further improve the access to appropriate treatment and reduce inappropriate use of antibiotics, WHO developed the AWaRe (Access, Watch, Reserve) classification of antibiotics.

This initiative provides concise, evidence-based guidance on the choice of antibiotic, dose, route of administration, and duration of treatment for more than 30 of the most common clinical infections in children and adults in both primary health care and hospital settings. To strengthen the surveillance and research of AMR, WHO established the Global Antimicrobial Resistance and Use Surveillance System (GLASS) in 2015.

This program aims to incorporate data from the surveillance of AMR in humans and surveillance of the use and consumption of antimicrobials and AMR data in the One Health sectors such as the food chain and the environment to provide a standardised approach in collecting, analysing and interpreting this data which can be used and shared to countries, territories and areas. It monitors the status of existing and new surveillance systems and emphasises on supporting LICs and MICs to improve data collection and policy making to prevent the spread of AMR.

WHO's latest annual review of the pre-clinical and clinical antibacterial pipelines has identified 27 antibiotics in clinical development that address WHO priority pathogens, out of which only 6 were classified as 'innovative'. Additionally, due to the lack of access to quality assured antimicrobials and shortage of off-patent antibiotics, countries across all levels of income and development are suffering in treating and preventing the spread of antimicrobials.

Therefore, WHO developed WHO bacterial priority pathogens list in 2017 and WHO fungal priority pathogens list in 2022 to guide research and development into new antimicrobials, vaccines, diagnostics and to inform public health action.

WHO also works closely with organisations such as the Global Antibiotic Research & Development Partnership (GARDP), the AMR Action Fund, and the Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator (CARB-X) to support the research and development of newer antimicrobials to ensure treatment.



## General Agenda

The agenda of this committee will be focused on combating resistance to antimicrobial drugs, and ensuring access equitably at a global scale, while delving deep into the complexities of the production, distribution and regulation of antimicrobial drugs.

WHO deals with promoting health, keeping the world safe, and serving the vulnerable. Confronting one of the greatest global threats of our time, there are several aspects that can be focused on when it comes to unravelling the resistance problem. Over the past few decades, AMR has been rapidly increasing, however, the development and production of antimicrobial drugs has slowed significantly. A largely contributing factor to this circumstance, is the lack of financial incentives to produce antimicrobials.

Pharmaceutical companies are not motivated to spend on the research and development of new drugs, simply due to the enormous sums of capital they demand. With the average cost being \$1 billion for the development of an antimicrobial drug, the potential rewards are substantially lower than the associated risks. Some antimicrobials, such as antibiotics, are used for only short periods of time. Additionally, any newly produced drug will have to be used cautiously because of the risk of its resistance developing quickly. If resistance to the new drug does develop, for example, then it becomes increasingly redundant as well. This lowers the demand and further plunges companies into vicious losses.

This lack of development and conflict of production, creates dependency on the widespread use of older drugs - giving opportunities to bacteria to adapt and multiply. This further reduces the availability of viable options, creating a cycle of continuous resistance as fewer effective drugs are obtainable on the market. With strained healthcare systems and ineffective drugs - infections, treatments, and surgeries become significantly riskier, turning previously treatable diseases to life-threatening. Simply put, there is a lack of innovation to outpace microbial evolution, and failure to address this problem can lead to fewer and futile attempts to tackle AMR.

Another factor adding to the resistance problem, is the inequity in distribution and lack of standard regulation for antimicrobial drugs. Differing income levels of countries cause disparities in the way that drugs are distributed and regulated. This leads to multi-faceted causes of AMR that are specific to groups of countries, but they all lead to the same cycle of AMR, and that eventually moves on to transcend all borders.

In HICs (high-income countries) for example, sufficient antimicrobials are available with structured distribution plans and regulatory procedures already established. However, these supposed strengths are the primary contributing factors for AMR development. Widespread availability in HICs means access is easy.

Greater access means greater awareness, where patients may demand treatment for minor illnesses, putting pressure on doctors and governments to make drugs more easily available. This leads to high levels of overuse, which is the primary reason for substantially increasing

resistance development in HICs. Healthcare providers in HICs may also prescribe antibiotics as “precautionary action” without definitive diagnostics, enabling unnecessary exposure.

Tight regulation systems in certain countries may make it difficult to buy antimicrobial drugs without a prescription from a licensed healthcare provider. Inequities in health care access among low-income communities in HICs that are prevented access to drugs due to stern regulations, will cause populations to search for alternatives in drugs of lower quality and standard, as well delay treatments - which will undoubtedly lead to more severe sickness and increased AMR.

In MICs (middle-income countries) and LICs (low-income countries), the challenges faced in terms of AMR are similar, with only potential variations in the severity of the problem. Unlike HICs, these countries suffer from limited access to antimicrobial drugs. This is due to economic restraints, where access to high-quality in large quantities may not be possible. Additionally, remote areas often don't have the healthcare infrastructure to accommodate extensive distribution. Prompting the use of sub-standard or counterfeit drugs, countries are unable to fully eradicate infections while allowing resistant bacteria to spread.

These rural areas are subject to both overuse and underuse of antimicrobials as results of a lack of understanding. In both cases, AMR is greatly accelerated. In contrast to HICs, MICs and LICs also have inconsistent and inadequate regulatory frameworks. This is most commonly a result of limited resources, limited surveillance and a lack of sufficient healthcare infrastructure. Furthermore, corruption at high levels of healthcare organisations induces the circulation of poor quality drugs. These cheaper drugs are also popular due to the reduced spending power and

affordability issues of the population in some countries. Increased supply chain issues where essential drugs are available only in minimal amounts, force the use of unchecked and dangerous alternative sources.

Antibiotics specifically, are also used extensively to prevent diseases and infections among animals in livestock farming, which adds to the risk of misuse and AMR spreading to humans through consumption as farmers are unaware of accurate dosages and specific drugs to use.

In HICs, as well as LICs and MICs, the conflicts that revolve around the production, distribution, and regulation are driving forces to the spread of AMR. A lack of incentives for production leads to dependence on existing, ineffective drugs. There is a stark difference in the standard of quality, availability, and the regulated distribution of antimicrobial drugs in countries with varying income levels. However, all elements trigger the same global problem - the acceleration and proliferation of AMR. A coordinated response is imperative from this committee to outpace microbial evolution, and establish viable solutions to ensure safety for the future.

## **Past Actions**

The World Health Organization has spearheaded global efforts to address the issue of antimicrobial resistance through action plans, thorough surveillance systems, as well as cross-sectional collaborations. WHO's past aid and action has been extremely pivotal in providing impressive global leadership, creating efficient and actionable plans and frameworks, and in fostering international cooperation to help tackle AMR.

Additionally, apart from WHO, other initiatives from governments, foundations, public-private partnerships, and pharmaceutical companies have previously come together to help produce a sustainable global response to AMR. They have played critical roles in funding research, strengthening healthcare systems, and raising awareness to combat AMR.

Firstly, the World Health Assembly endorsed the Global Action Plan on AMR in 2015, which outlines five key strategies to allow member states to combat antimicrobial resistance. The strategies include raising awareness, improving surveillance, reducing rates of infection, optimising the use of antimicrobials, and promoting sustainable investments. Moreover, to monitor global data on AMR, the Global Antimicrobial Resistance Surveillance System (GLASS) was established in 2015 too, with the help of WHO. This allowed countries to effectively collect, analyse, and share data to identify and implement key areas of action.

The World Health Organization also took on the “One Health” approach back in 2008, which was developed as a result of WHO’s collaboration with the FAO (Food and Agriculture Organization) and the OIE (Office International des Epizooties). This collaboration has focused on addressing the impact of AMR on humans, animals, and the environment too. Additionally, awareness campaigns propelled by WHO such as the WAAW (World Antimicrobial Awareness Week) enabled the education of the public, health workers, and policy makers.

In addition, the NAP (National Action Plan) for AMR was created in 2017 and it continues to be another initiative supported thoroughly by WHO. Used in 114 countries across the world, this

strategic NAP objective offers guidance for context-specific policies on antimicrobial resistance such as antibiotic stewardship programs implemented in hospitals or even IPC (improving infection prevention and control), for example.

The US national strategy for CARB (Combating Antibiotic-Resistant Bacteria) was introduced in 2014 and has since aimed to enhance the stewardship of antibiotics along with which it has developed more efficient diagnostic tools to reduce AMR. Similarly, the UK's Fleming Fund has committed over £265 million to support LICs and MICs in improving its antimicrobial resistance surveillance system, its response strategies to the threat of AMR, and its diagnostic labs.

Moreover, pharmaceutical companies like Pfizer and Novartis have contributed significantly to reducing the threat of AMR by their choice to join the fight against its spread. These companies have worked on promoting responsible antimicrobial use and improving access of essential medicines to low-income communities. In addition, the Global Antibiotic Research and Development Partnership (GARDP) has worked in collaboration with WHO to accelerate new treatments for resistant infections. On the other hand, the CARB-X fund is a global partnership which funds early stage research into antibiotics, vaccines, and diagnostics.

Overall, the past actions taken to combat the threat of AMR have spanned global action plans, improved the surveillance systems in most countries, and have permitted cross-sector collaborations to tackle the threat of AMR. WHO has previously provided several strategic guidance and support to countries across the world through strategies and initiatives such as GLASS, the Global Action Plan, WAAW, and National Action Plans.

It has enabled the strengthening of data collection, data monitoring, and the tracking of AMR trends. The “One Health” approach has also helped ensure coordinated action across human, animal, and environment health sectors in the past. A majority of these initiatives and foundations continue to take action against the global spread of antimicrobial resistance.

## Ideas To Consider

AMR stands as one of the most urgent global threats and it undermines decades of progress in the medical field. The effectiveness of life-saving antibiotics are steadily diminishing as bacteria, viruses, fungi, and even parasites are becoming resistant to existing treatments. This makes it more difficult to treat infections and the issue has now extended beyond healthcare. Antimicrobial resistance has proven to hinder agriculture, the environment, pharmaceutical development, and it has even affected global trade and travel.

While addressing the issue of AMR, it is vital to consider a number of factors ranging from the role of antibiotics in farming to the need for more improved surveillance systems. At the same time, however, one must ensure that the solutions are ethical and sustainable for countries at varying levels of development including LICs, MICs, and HICs.

While exploring AMR, several key ideas might warrant research and discussion and therefore, we recommend looking into a few relevant topics under antimicrobial resistance and stewardship. Firstly, the overuse of antibiotics in agriculture could potentially raise questions

about the necessity and implications of a global ban on such practices. Moreover, the ethical considerations surrounding antibiotic access in low-income countries presents a complex challenge that may demand careful discussion.

Additionally, it would be useful to acknowledge the role of pharmaceutical companies in antibiotic development and especially the accountability measures they should face. This could include incentives or penalties but we encourage that you attempt to come up with more innovation as well. Another focus could be on investigating the effectiveness of global surveillance and monitoring systems for global antimicrobial use.

We also suggest exploring and innovating strategies to combat counterfeit antibiotics in developing regions. Alternative therapies such as bacteriophages and vaccines could also serve to offer interesting solutions that are worth examining. Furthermore, the feasibility of travel restrictions to curb the spread of superbugs raises important ethical and practical concerns. Most importantly, do avoid overlooking the scale of impact and threat that AMR poses.

Apart from conceptual ideas that are useful to consider, with the escalating global health crisis of AMR, different countries are working to adopt diverse strategies to combat the threat it poses. They emphasise upon public awareness, regulatory measures, and innovative research.

Delving into understanding the stances and policies of countries is valuable in allowing you to be aware of the dynamics that shape countries relations between countries across the world,



especially on the topic of antimicrobial resistance and combating it. Researching further into this will work well for you to distinguish between your allies and opponents.

- **United States:** Consider how the country emphasizes particularly on public health initiatives such as the National Action Plan. Additionally, the CDC (Centers for Disease Control and Prevention) plays a valuable role in enhancing public awareness through educational campaigning and use of resources to promote responsible antibiotic use.
- **United Kingdom:** The UK has a proactive approach towards combating AMR and its National Action Plan aims at reducing dependency on antibiotics and driving global innovation. Considering the UK's commitment to cutting antibiotic use in agriculture would be useful to get further insights into the action taken by this country.
- **India:** India faces serious challenges due to antibiotic misuse and over-the-counter availability. It is important to acknowledge the problems that India struggles with in combating AMR. Focus on understanding the essential need of enforcing regulations from its National Action Plan on AMR to improve infection prevention and surveillance.
- **China:** China is responsible for significant usage and production of antimicrobials. Further exploring the government's initiatives to regulate sales and promote responsible use in both healthcare and agriculture would be useful.

- **European Union:** The EU covers a vast number of countries and its “One Health” approach is particularly impressive, wherein it makes sure to integrate human, animal, and environmental health. Considering their strict guidelines in terms of antibiotic use and funding for research on new treatments is important.
- **South Africa:** It is imperative to acknowledge South Africa’s AMR National Strategy Framework since it emphasises upon thorough surveillance, stewardship in hospitals, and public education to mitigate the undiagnosed use or misuse of antimicrobial drugs.

## Questions A Resolution Must Answer (QARMA)

1. What is the role that international organisations can potentially play in supporting countries to address the global threat of AMR?
2. What strategies can be implemented to improve the distribution and regulation of antimicrobials in both high-income and low- to middle-income countries?
3. How can countries work towards educating communities about the dangers of antimicrobial misuse and resistance?
4. What measures can be taken to ensure equitable access to high-quality antimicrobial drugs in low and middle-income countries?

5. In what ways can countries foster collaboration and knowledge sharing to work together to be able to combat AMR on a global scale?

## Recommended Reading

We recommend that you read through these sources before attending the committee session.

They will be extremely helpful in giving you a comprehensive understanding of the topic.

- [AMR: Key Facts](#)
- [AMR: Timeline](#)
- [AMR: Systematic Analysis of Its Global Burden](#)
- [AMR: A Global Multi-Faceted Phenomenon](#)
- [AMR: Causes and How It Spreads](#)
- [AMR: Controlling Its Emergence and Spread](#)
- [AMR: Investment, Action, and Resolution](#)
- [AMR: Poverty and Healthcare Infrastructure](#)