IFMSA Policy Proposal
[Antimicrobial Resistance]

Proposed by the Team of Officials

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Policy Statement

Introduction

Antimicrobial Resistance (AMR) is becoming one of the biggest health threats to the human population worldwide. The ever-increasing resistance of microbes to antimicrobials is already costing a devastating amount of lives. At the same time many parts of the world lack access to lifesaving antimicrobials. Without rapid action, the approach of a post-antimicrobial era is imminent. IFMSA reaffirms its strong commitment in fighting Antimicrobial Resistance and making the voice of the civil society and the youth heard.

IFMSA position

IFMSA believes that the continuing increase in Antimicrobial Resistance is one of the greatest challenges to global health today. IFMSA recognizes the importance of controlling AMR to protect public health and reduce the associated premature mortality and morbidity as possible. In addition, it is important to take into consideration that it is not just excess use that has to be tackled. IFMSA commits to improve professional education and to strengthen international collaboration between health students in tackling AMR the One Health-way. Lastly, IFMSA highlights that the efforts to control AMR must also take into consideration the vulnerable groups that currently lack access to lifesaving antimicrobials.

Call to Action

Therefore, IFMSA calls on:

Governments to:

1. Strengthen national surveillance and research on AMR
   a. Create, finance and implement National Action Plans (NAPs) aligned with WHO Global Action Plan
   b. Gather data on antimicrobial medication usage and report back to WHO
   c. Encourage and support research that aims to develop new vaccines, antimicrobials, diagnostics and other AMR related innovation.
   d. Guarantee public return, where public investments into R&D was made through conditions attached, such as but not limited to global access licensing models
   e. Engage in alternative business models to support innovation

2. Improve awareness and understanding of AMR
   a. Inclusion of AMR in school curricula and professional education of all health professionals
   b. Invest and launch public communications programs raising awareness of risk of AMR to general population
3. Reduce the rate of infections by focusing on hygiene and infection prevention
   a. Invest in point-of-care resources that allow rapid bedside identification of bacterial infections and identification of antibiotic susceptibility
   b. Ensuring that infection control practices are in place in hospitals and are regularly inspected
   c. Implement training on hygiene and infection prevention as mandatory to health professionals
4. Reduce the overuse of antimicrobial medication in human and animal health
   a. Creation of national and local stewardship programs
   b. Control antimicrobial sales and reduce inappropriate use of antimicrobials by allowing only trained professionals and institutes to distribute the antimicrobials
5. Empower the civil society by providing transparent data on AMR control efforts and holding regular open consultations with civil society stakeholders

The World Health Organization to:
1. Support the work of the United Nations Interagency Coordination Group (IACG) by providing technical assistance:
   a. Develop the GLASS-surveillance to include more Member States
   b. Encourage all WHO members to strengthen national antimicrobial stewardship and develop policies to confront antibiotic resistance
2. Generate policy guidelines and provide technical support for Member States that require assistance, in order to provide all member states with access to tools necessary to address AMR
3. Actively encourage innovation and research regarding methods of AMR and development of new diagnostics, vaccines and antibiotics.

Medical faculties and other teaching settings to:
1. Incorporate AMR and rational prescription of antimicrobials into all undergraduate medical curricula.
2. Ensure that infection control is a mandatory subject in medical curricula and that infection control protocols are implemented in affiliated teaching hospitals.
3. Implement antimicrobial stewardship programs in affiliated teaching hospitals
4. Encourage research on AMR; appropriate prescribing guidelines, and the development of new classes of antimicrobials, vaccines and diagnostics.
5. Support the One health approach. With teaching involve other healthcare facilities (e.g. nursing, veterinary, pharmaceutical) and encourage students to discuss and learn different perspectives/layers of antimicrobial resistance

IFMSA National Member Organizations (NMOs) and medical students to
1. Raise awareness on AMR through active advocacy, social media, awareness campaigns, publications, etc.
2. Participate in reviewing the national policies on AMR
3. Promote the importance of One Health in tackling AMR
4. Promote vaccinations to limit the spread of infections and thereby the need for antibiotics.
5. Advocate AMR to be a mandatory part of medical curricula

Pharmaceutical sector to:
1. Invest in R&D to develop new antimicrobials, diagnostics and vaccines, with a special focus on priority pathogens.
2. Employing ethical sales that delink internal bonuses from sales volumes and instead prioritize employees technical knowledge.
3. Ensure the affordability of created innovations.
4. Be active in educating on antibiotic stewardship.
5. Ensure manufacturing quality and work to minimize the environmental impact of antimicrobial discharge.

Food & Agriculture sector to:
1. Raise awareness about AMR and emphasize the role of this sector in its spread.
2. Establish a monitoring/surveillance system to control antimicrobial use in food, cultures and animal husbandry.
3. Promote the optimization of the use of antimicrobial drugs (including antifungals) in animals and crops.
Position Paper

Background

World Health Organization (WHO) defines antimicrobial resistance (AMR) as the ability of microorganisms (including bacteria, fungi, viruses and parasites) to become resistant when they are exposed to antimicrobial drugs (such as antibiotics, antifungals, antivirals and antimalarials) used to treat the infections they cause. They are referred to as “superbugs”. The resistance leads to ineffective medicines and untreatable infections what increases the risk of spread to others, kill and imposes huge costs to individuals and society.

AMR is now one of gravest threats to human health in the history of medicine. It is estimated that with the current pace the mortality due to AMR will continue its steep rise and by 2050, lead to more deaths than cancer today. AMR will also have devastating effects on global economy, especially that of the LMIC countries where the health systems are more fragile. According to a recent report by World Bank, the effect of AMR on global economy will equal the financial crisis of 2008-09, with the exception that the effect of AMR will be sustained for many years to come.

The threat of AMR has been long recognized inside the health sector. Yet, it is only during the past few years that steps have been taken to tackle AMR on a global scale. In 2015, the World Health Assembly adopted a Global Action Plan on AMR. In the United Nations General Assembly (UNGA) in 2016 a High-Level Meeting was held on AMR. The Meeting, in turn, led to the unanimous adoption of a Political Declaration on AMR. The main message of the Declaration was that urgent action has to be taken cross-sectorally to avoid the catastrophic consequences of the rising resistance.

AMR has multiple ways of spreading. It represents one of the principles of evolution of bacteria and other pathogens. Moreover, it does not recognize geographical borders, nor differentiate between humans and animals. Resistance occurs naturally over time, usually through genetic changes. However, the misuse and overuse of antimicrobials is accelerating this process. It has increasingly become a problem in recent years because the pace at which we are discovering novel antibiotics has dramatically slowed, while antibiotic use is rising; yet at the same time, resistance is developing fast. Actually, overuse and misuse of antimicrobials is facilitated in many places by their availability over the counter (without a prescription), but even where this is not the case prescribing practices vary significantly between (and often within) countries. Such issues are only made worse by large quantities of counterfeit and substandard antimicrobials permeating the pharmaceuticals markets in some regions. Examples of misuse include when people with viral infections like colds and flu, and when they are given as growth promoters in animals or used to prevent diseases in healthy animals, as the human population is not the only one contributing to the spread of the resistance, take them. Furthermore, out of all the antibiotics used, humans consume only 30%, and animals consume the rest.

Without effective treatment, many standard medical treatments will fail or turn into very high-risk procedures. Currently, when most surgery is undertaken, patients are given preoperative prophylactic antibiotics to reduce the risk of bacterial infections. In a world where antibiotics do not work, many procedures, such as hip operations, which currently allow people to live longer active lives and may enable them to stay in the workforce, might become too risky to undertake. Moreover, modern cancer treatments often suppress patients’ immune systems, making them more susceptible to infections. Therefore, without effective antibiotics to prevent or treat infection, chemotherapy would become a much riskier proposition. Adding to this, Antimicrobial Resistance can also increase duration of illness, increasing the likelihood of spread to others. In turn, this may increase the disease burden and health costs of infectious diseases.
Discussion

Several breakthroughs have happened in the past few years to push AMR higher on the global agenda. Despite this, several signs point to the unfortunate conclusion that the global momentum on AMR is decreasing when it should be increasing. This was the key message of one of the leading figures of IACG, the Dame Sally Davies, in her speech at the UNGA in 2017. Only a few countries have made strong, political commitments to tackle AMR and only a few countries are implementing or have found the financing for their respective National Action Plans that they were supposed to finalize by 2017. In addition, the amount of civil society involvement in the process is still low. IFMSA sees the following topics of special importance in order to achieve the targets set in WHO GAP.

National Action Plans:

According to the WHO Global Action Plan, all Member States are to develop National Action Plans by the year 2017. According to the WHO conducted self-assessment questionnaire, in July 2017 79 have a National Action Plan and 43 are currently developing one. The problem, however, is that only a much smaller number of Member States have found financing for these plans and started their implementation. Without comprehensive Member State action, the WHO GAP will not reach its targets. We need to stress the need for comprehensive financing as a key part of the National Action Plans. Comprehensive accountability mechanisms have to be developed to hold the Member States to their promises. The whole of society should be invited to give input in the process of creating the NAPs. Only with inclusion of the civil sector can we create the movement necessary to tackle AMR.

Making the economic case for AMR:

According to the recent report by World Bank, the effect of AMR on global economy will equal the 100 trillion USD. Both the WHO GAP and the World Bank report call for making the case of AMR an economic one. There exists ample evidence to support the argument that AMR is indeed an high-yield investment. According to World Bank, the cost of AMR containment in low- and middle-income countries is estimated at $9 billion annually through 2050. The annual rate of return on this investment could reach 88% per year, if 75 percent of AMR’s negative effects are avoided. We have, however, not been successful in taking this message forward to the various levels of global governance. The global AMR movement lacks serious investment that needs to be recognized and fixed. We need to put more effort in advocating the AMR as a smart investment case globally, nationally and locally. To do this we need further analyses and data on AMR financing mechanisms. More effort should also be put into proving the case of investing in conservation strategies, not just in antibiotics.

One Health:

One Health is a global strategy, integrating the effort of multiple disciplines to attain optimal health for people, animals and the environment. These three entities make up the One Health triad, with the health of each intricately connected to the others. This collaborative, coordinated approach between sectors focuses on potential and existing health hazards that originate at the animal-human-environment interface. IFMSA is strongly committed to promoting One Health as the only suitable approach to solving the case of AMR. Without interprofessional collaboration, there is no way that we may attain the targets set in the WHO GAP. The One Health approach has to be recognized in the recommendations IACG is to present to the United Nations Secretary-General in 2019.

Civil Society engagement:

When looking at past successes in global health, one usually refers to HIV, malaria and tuberculosis. What is common with these three themes is the strong civil society movement backing them. In contrast, AMR completely lacks a civil society movement. This is a problem because there is no method as effective in keeping Member States accountable for their actions than a strong civil society movement. An empowered civil society benefits all parties by enabling the effective implementation of government policies, raising awareness among the population and engaging more stakeholders in the process. This is a win-win situation that should be facilitated by promoting
transparency and open consultations in all processes related to AMR. Civil society will be also one of the key players in keeping AMR on the political agenda after the work of IACG terminates in September 2019.

AMR in the SDGs:

AMR not being integrated in the Sustainable Development Goals of the Agenda 2030 makes it hard to gather political commitment and may prove to be one of the most central challenges in keeping AMR high on the political agenda. For this reason, all possible ways to implement AMR into the SDG agenda should be explored, be that in the form of indicators or proving the linkage of AMR to the achievement of the whole Agenda 2030. Also the synergy between other global health topics and AMR, like that of UHC, should be explored and put to effective use.

The role of doctors:

In most countries, antimicrobials are provided only if physician approved prescriptions are presented. Since most countries have a system where prescriptions come from physicians, emergence of resistance, due to irrational prescription and drug misuse is becoming a leading factor for AMR[1].

Antibiotics are the most prescribed out of all antimicrobial drugs. According to the Centers for Disease Control and Prevention, at least 30% of prescribed antibiotics are not needed. Even with the remaining 70% of prescriptions, improvement in selection is needed to prescribe the most appropriate antibiotics [2]. Educating healthcare providers on appropriate antimicrobial use is key in reducing resistance. Professional prescription patterns form early in professional career. Hence, there is no better opportunity to educate about AMR than during the early professional education.

There are many factors that lead doctors to prescribing antimicrobials when they are not needed, or simply to prescribing the wrong ones for the given situation. Following are some of the reasons recognized as major factors: Pressure from the patient to prescribe antimicrobials, and be given a medication that is not an analgesic. Decreased time spent with the patient to communicate and explain the circumstances needed to prescribe antimicrobials, and when they are not necessary. Lack of rapid diagnostic tools to aid in clinical diagnosis is also needed. These reasons, among others, are contributing to the emergence of Antimicrobial Resistance(17)

Vaccines:

Vaccination forms one of the most effective ways in preventing infection and thereby, reduces the need for antimicrobial medication. Therefore, making better use of existing vaccines and developing new vaccines is essential in the curbing the spread of AMR.(15)

For example, if every child in the world received a vaccine to protect them from infection with Streptococcus pneumoniae bacteria (which can cause pneumonia, meningitis and middle ear infections), this would prevent an estimated 11 million days of antibiotic use each year.

Vaccines against viruses, such as the flu, also have a role to play, because people often take antibiotics unnecessarily when they have symptoms such as fever that can be caused by a virus. On another hand, developing and using new vaccines to prevent bacterial diseases can further reduce the development of resistance. More investment in R&D for vaccines is in high demand.

Post- 2019 period:

The mandate of the Interagency Coordination Groups ends by September 2019, when the IACG final report is handed to the UN Secretary-General.(13) After this, the Secretary-General will decide whether to not present the final report to the Member States. AMR is not a problem that can be solved during the current mandate of the IACG. More permanent mechanisms have to be created to continue the global coordination of the AMR movement. It is imperative for such structure to have necessary, un-earmarked funding to be able to deliver. The entity should also be under close supervision of the tripartite: WHO, FAO and the OIE. The role of the tripartite is important to avoid further segmentation of the health sector inside the structure of the United Nations. In addition, this entity has to have clear accountability mechanisms and a clear mandate, defining the targets of the AMR movement.
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