

## **ADDRESSING VACCINE HESITANCY AND MISINFORMATION**

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The COVID-19 pandemic has disrupted the livelihood of countries' citizens worldwide with approximately 6.4 million lives lost since its transmission in January 2020.<sup>1</sup> Country progression has halted, impacting member states' education systems, economies and overall capacity building. To combat the transmission of the disease and restore individuals' livelihoods and country progression, the United Nations (UN) in collaboration with governments, non-governmental organizations (NGOs), and other UN agencies has mobilized the distribution of the COVID-19 vaccine. As of 26 July 2022, a total of 12.2 million vaccine doses have been administered. However, low- and middle-income countries are not administering vaccine doses at the same rate as high-income countries.<sup>2</sup> The UN has mobilized to increase distribution within these countries, yet, two of the biggest threats disrupting vaccine administration are the refusal to receive the vaccine as well as misinformation.

The World Health Organization founded in 1948 is a specialized agency created to promote healthier lives by connecting nations, partners and people.<sup>3</sup> In their effort to promote healthier lives, WHO advocates and assists in the vaccination and immunization of individuals to prevent and control a large number of infectious, cancerous and chronic diseases. Vaccinations not only prevent sickness and death associated with infectious diseases such as diarrhea, measles, pneumonia, polio and whooping cough, they also advance gains in education and economic development. The World Health Organization has reported that immunization currently prevents 4-5 million deaths every year.<sup>4</sup> Therefore, vaccine hesitancy is a threat to global health because it interferes in the administration of preventable health care.

In an effort to more closely address vaccines and immunization, WHO created the Strategic Advisory Group of Experts (SAGE) on Immunization. Established in 1999 by the

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<sup>1</sup>(*Covid-19 map*)

<sup>2</sup>(*Who coronavirus (COVID-19) dashboard*)

<sup>3</sup>(*About who*)

<sup>4</sup>(*Immunization 2019*)

Director-General, SAGE meets twice a year to develop recommendations on global vaccine policies and strategies for vaccine-preventable diseases.<sup>5</sup> In the 2014 SAGE Report from the Working Group on Vaccine Hesitancy the term “vaccine hesitancy” was adopted, defined as a delay in acceptance or refusal of vaccines despite availability of vaccination services.<sup>6</sup> According to a vaccine advisory group to WHO, reasons why people choose not to vaccinate are complex; complacency, inconvenience in accessing vaccines, and lack of confidence are seen as key reasons in underlying hesitancy.<sup>7</sup> The Strategic Advisory Group of Experts on Immunization acknowledges that vaccine hesitancy raises the necessity to combat this threat.

Immunization is a preventable measure to combat infectious diseases and decrease mortality rates. Yet, many people around the world, including 20 million infants, have insufficient access to vaccines. To combat the restriction of progression or even reversal of immunization, the World Health Assembly, the main governing body of WHO, endorsed the Immunization Agenda 2030 (IA2030), a global strategy which envisions, “A world where everyone, everywhere, at every age fully benefits from vaccines for good health and well-being”.<sup>8</sup>

The World Health Organization has made many efforts to pioneer the administration of vaccines for preventable diseases. The implementation of the IA2030 global initiative is a strategic measure adopted by the World Health Assembly to increase immunization and address vaccine hesitancy within disadvantaged populations. IA2030 has adopted seven strategic priorities to address immunization challenges: immunization programmes for primary healthcare/universal health coverage; commitment & demand; coverage & equity; life course & integration; outbreaks & emergencies; supply & sustainability; and research & innovation.<sup>9</sup>

Strategic Priority Two (SP2) and Strategic Priority Three (SP3) of the IA2030 global initiative highlight the necessity to combat vaccine reluctance through community building and breaking down health care barriers. SP2 focuses on addressing vaccine hesitancy in its

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<sup>5</sup> (*Strategic Advisory Group of Experts on Immunization: About Us*)

<sup>6</sup>(*Immunisation a global issue update from Sage - Pharmac 2016*)

<sup>7</sup> (*Ten health issues who will tackle this year*)

<sup>8</sup> (Lee, *Vision and impact goals*)

<sup>9</sup> (Lee, *Strategic Priorities* )

commitment to ensure that all people and communities value, actively support, and seek out immunization services by engaging with communities to build people's trust and acceptance of the use of vaccines.<sup>10</sup> SP3 emphasizes the goal to protect everyone through full immunization, highlighting disadvantaged populations by engaging representatives of local communities and local health providers to address health care barriers.<sup>11</sup> IA2030 is imperative for increasing vaccination rates because invalidates the threat of vaccine hesitancy amongst disadvantaged groups and combats this challenge through community building.

The COVID-19 pandemic has impacted the livelihood of all individuals globally. However, the impact has not been shared equally. A 2021 WHO global review of national deployment and vaccination plans indicates that refugees and migrants grapple with challenges and barriers in accessing vaccination services. The pandemic has exposed vulnerabilities and exacerbated existing inequalities between low- and high-income countries, having the biggest impact on the poorest and most vulnerable people, which includes refugees and migrants. Refugees and migrants experience poor access to quality health care, distrust of governments and/or fear of detention and deportation if seeking health care. The consequences of vaccine hesitancy for refugees and migrants include a higher burden of COVID-19 infection and disproportionate representation in hospitalizations and deaths resulting from COVID-19.<sup>12</sup>

Fear is a major contributor to vaccine hesitancy within refugee and migrant groups. It has been found that these marginalized groups have lower levels of routine vaccine uptake because of stigma, discrimination, and exclusion. A study in the United Kingdom reported that 72% of the refugees and migrants contacted felt hesitant about accepting a COVID-19 vaccine, due to concerns over vaccine content, side effects, lack of information or low perceived need.<sup>13</sup> Therefore, misinformation or lack of information are factors of vaccine hesitancy that contribute to lower vaccination rates amongst disadvantaged groups.

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<sup>10</sup> (Lee, *Commitment & Demand*)

<sup>11</sup> (Lee, *Coverage & equity*)

<sup>12</sup> Covid-19 immunization in refugees and migrants: Principles and key considerations: Interim guidance, 31 August 2021

<sup>13</sup> (COVID-19 *Immunization in refugees and migrants: principles and key considerations* 2021)

Combatting vaccine hesitancy is dependent upon global vaccine equity. As of 30 August 2021, 57.3% of the population of high-income countries had been vaccinated compared with 2.14% of those in low-income countries. In order for low-income countries to achieve vaccine equity, health-care spending would need to be increased by an inaccessible 56.6%. Developing countries' lack of vaccine supplies has implications for increased financial health-care spending and impacts the rollout of COVID-19 vaccine for refugees and asylum seekers since 86% of them live in low-income countries.<sup>14</sup> Vaccine inaccessibility is a factor in vaccine hesitancy, perpetuating the refusal and reluctance to receive vaccination amongst disadvantaged groups.

COVID-19 informational campaigns amongst disadvantaged groups is imperative in combating resistance to vaccination. Research, surveys, and studies have reported that refugees and migrants attribute lack of information in regard to COVID-19 vaccine effectiveness and safety as a contributor to reluctance. A June 2021 survey by 52 national Red Cross and Red Crescent societies found that 90% reported that lack of information or awareness on where and how to access COVID-19 vaccines is a key barrier for migrants, with 67% identifying language barrier. In Lebanon an ongoing study about vaccine hesitancy among Syrian refugees has shown that the majority of the sample (66%) reported an intention to receive a COVID-19 vaccine if it is safe and free.<sup>15</sup> COVID-19 informational campaigns are needed to facilitate vaccination rates as well as reduce disparities amongst refugees and migrants.

Inaccessibility to vaccine sites and misinformation are factors that contribute to low vaccination rates in low-income countries. Dr. Chansay Pathammavong, deputy director of the National Immunization Programme of the Lao People's Democratic Republic (Lao PDR), suggested a challenge to vaccinating individuals in Lao PDR was inaccessibility. Due to the diverse landscape elderly and handicapped people are inhibited from accessing vaccination sites. Elderly and ethnic minorities make up most of the unvaccinated individuals in the country. Dr. Pathammavong cites fear of side effects, refusal to get the second dose because of fear of minor side effects from the first dose, and low risk perception as major reasons to refuse COVID-19

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<sup>14</sup> (COVID-19 Immunization in refugees and migrants: principles and key considerations 2021)

<sup>15</sup> (COVID-19 Immunization in refugees and migrants: principles and key considerations 2021)

vaccination.<sup>16</sup> Low- and middle-income countries are facing the largest adversity in increasing vaccination rates corresponding to vaccine hesitancy because disadvantaged groups are being disregarded in access to vaccination sites and access to information.

Combatting vaccine hesitancy within disadvantaged groups through informational campaigns is imperative to increase vaccination rates; increasing vaccine delivery within low- and middle-income countries facilitates the diminishment of vaccine hesitancy. The World Health Organization works in collaboration with the United Nations Children’s Fund (UNICEF), and Gavi, the Vaccine Alliance to launch the COVID-19 Vaccine Delivery Partnership (CoVDP) to increase existing support for the AMC 92. The AMC 92 are a total of 92 eligible low- and middle-income countries and economies chosen to have access to COVID-19 vaccines by the Gavi’s COVAX Advance Market Commitment.<sup>17</sup> CoVDP, however, focuses foremost on the 34 countries that were at or below 10% coverage in January 2022, working closely with countries to provide access to urgent operational funding, technical assistance, and political engagement to increase vaccination rates and monitor progress.<sup>18</sup> In addressing inequities in vaccine access, CoVDP is making a concerted, country-by-country effort to increase the global vaccination rate.

In a coordinated effort to increase, monitor and facilitate vaccination rates in low- and middle-income countries, the COVID-19 Delivery Partnership has implemented a Situation Report to track progress. The CoVDP June 2022 Situation Report highlights the necessity to curb vaccine hesitancy and generate vaccine demand. The report notes that among 18 countries that were below 10% full vaccination the month prior, 7 have managed to go beyond 10%: Niger, Nigeria, Somalia, South Sudan, Sudan Syria, and Tanzania.<sup>19</sup> Somalia initially faced challenges of misinformation amongst women and low uptake in rural areas and among marginalized groups. To counter these challenges, Somalia deployed the Social Mobilization Network (SOMNet), conducting house-to-house mobilization generating demand amongst its 19 regions. Social media

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<sup>16</sup>(Pathammavong, *Getting vaccines into arms - world trade organization 2022*)

<sup>17</sup> (*Covid-19 vaccine delivery partnership*)

<sup>18</sup> (*Covid-19 vaccine delivery partnership*)

<sup>19</sup> (*COVID-19 Vaccine Delivery Partnership Situation Report: June 2022, pg.2*)

was also instrumental in Somalia's action against misinformation and its efforts to promote dissemination of accurate COVID-19 information. The CoVDP has supported Somalia in generating vaccine demand by disbursing US\$ 7.3 million to fund their next vaccination campaign and continue national efforts to increase coverage.<sup>20</sup> The CoVDP is evidence of the necessity to monitor and assist countries with low vaccination rates to allow individual countries to combat vaccine hesitancy domestically.

The gap in vaccination rates between the Global South and high-income countries is attributable to vaccine distribution and accessibility. High-income countries' accessibility to COVID-19 vaccines contributes to their countries' low vaccine hesitancy. In the United States, 79.5% of the US population have completed their primary series of doses.<sup>21</sup> Due to accessibility to vaccination sites the United States high rate of vaccination contributes to the country's low rates of vaccine hesitancy. As of April 2021, about 38% of Americans expressed vaccine hesitancy and/or refusal, but vaccine hesitancy continues to decrease and was 12.6% as of September 2021.<sup>22</sup> However, distribution and administration of vaccine doses aren't congruent; vaccine dose deliveries are at a higher percentage than the number of doses administered. Thus, despite access to vaccination sites, many Americans still express a hesitancy to vaccinate. According to research, more than 25% of adults may not be willing to receive a COVID-19 vaccine in large metropolitan cities across the globe, citing concern about side effects and safety.<sup>23</sup>

Evidence has found that celebrity endorsement in COVID-19 vaccines is influential in the boosting of vaccine uptake, that citing celebrity endorsement is influential in creating trust with the public.<sup>24</sup> During the 2021 National Football League (NFL) Season the NFL and NFL Players Association (NFLPA) leadership collaborated to encourage vaccinations among fans and the general public by offering vaccine incentives, such as 50 free Super Bowl LVI tickets in February of

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<sup>20</sup>(*COVID-19 Vaccine Delivery Partnership Situation Report: June 2022, pg.8*)

<sup>21</sup>(*CDC Covid Data tracker*)

<sup>22</sup>(*Covid-19 vaccine confidence 2022*)

<sup>23</sup>(Trent et al., *Trust in government, intention to vaccinate and COVID-19 vaccine hesitancy: A comparative survey of five large cities in the United States, United Kingdom, and Australia 2021*)

<sup>24</sup>(Wei et al., *Influence of internet celebrity medical experts on covid-19 vaccination intention of young adults: An empirical study from China 2022*)

2022 to fans who shared their reason for getting vaccinated.<sup>25</sup> Overall, vaccine hesitancy is evident amongst all countries despite access to the COVID-19 vaccine; endorsement is necessary to continue vaccine uptake.

## **Conclusion**

The World Health Organization defined vaccine hesitancy as the refusal to receive vaccination despite access. In a time period in which COVID-19 is a global problem with approximately 6.4 million lives lost, increasing vaccination rates is imperative to prevent an increase in mortality rates. To combat vaccine reluctance, WHO has implemented multiple programs including the Immunization Agenda 2030 and the COVID-19 Vaccine Delivery Partnership to combat vaccine reluctance. Both programs zero in on the necessity to improve vaccination rates in low- and middle-income countries. The IA30 combats vaccine hesitancy through the implementation of community building and tackling health care barriers. The CoVDP approaches vaccine hesitancy through monitoring and funding assistance and promoting vaccines in countries below 10% vaccination rates. It is imperative that disadvantaged groups be aware of the importance of receiving the COVID-19 vaccine and have easy access to vaccine sites.

## **Questions to Consider**

1. Does your State struggle with vaccine hesitancy? If so, what actions has your State done to combat this?
2. Does your State agree with the actions the United Nations has taken to combat vaccine hesitancy?
3. How has your State combatted misinformation?
4. Has your State used community building to promote vaccine confidence?
5. Does your State have a large refugee and migrant group? If so, what actions has your State taken to distribute vaccine doses to these disadvantaged group?

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<sup>25</sup>(For NFL players, leadership and teamwork builds COVID-19 vaccine confidence 2021)

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## **ANTIMICROBIAL RESISTANCE**

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### **Defining Antimicrobial Resistance (AMR)**

The development of antibiotics, antivirals and antimalarials are some of modern medicine's greatest successes. According to the World Health Organization, "Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi, and parasites change over time and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread, severe illness, and death. As a result of drug resistance, antibiotics and other antimicrobial medicines become ineffective, and infections become increasingly difficult or impossible to treat."<sup>26</sup>

AMR occurs naturally over time, usually through genetic changes. Antimicrobial-resistant organisms are found in people, animals, food, plants, and the environment in the water, soil, and air. Antimicrobial-resistant organisms can spread from person to person or between people and animals, including from food of animal origin. Antimicrobial-resistant organisms are largely driven by the misuse and overuse of antimicrobials combined with a lack of access to clean water, sanitation, and hygiene (WASH) for both humans and animals. The difficulties of antimicrobial resistance are further exacerbated by a general lack of awareness and knowledge of AMR; lack of enforcement of legislation, poor infection and disease prevention; and poor control in healthcare facilities and farms. Poor access to quality, affordable medicines, vaccines, and diagnostics can also increase the spread of antimicrobial-resistant organisms and diseases.<sup>27</sup>

The spread of Antimicrobial resistance has enabled bacteria, parasites, viruses and fungi to resist some of our strongest medicines and threatens to send us back to a time when we were unable to easily treat infections such as pneumonia, tuberculosis, gonorrhoea, and salmonellosis. In addition to the spread of infectious diseases, the inability to prevent infections could seriously compromise surgery and procedures such as chemotherapy.

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<sup>26</sup> *Antimicrobial Resistance*, n.d.

<sup>27</sup> *Antimicrobial Resistance*, 2021

## Present Situation

The present situation is already beginning to show the dire need for action surrounding the issue of antimicrobial resistance. The World Health Organization (WHO) states that, “Antimicrobial resistance threatens the very core of modern medicine and the sustainability of an effective, global public health response to the enduring threat from infectious diseases.”<sup>28</sup> The WHO also warns that misuse and overuse of antibiotics and other antimicrobial drugs in human medicine and food production have put every nation at risk. In addition to both the overuse and other misuse of antibiotics, there are few replacement products currently under development. The WHO warns that without harmonized and immediate action on a global scale, the world is heading towards a post-antibiotic era in which common infections could once again kill.<sup>29</sup> Our current best weapons to fight many infectious diseases are quickly losing their efficacy.

The issue of antimicrobial resistance is not a far-flung fear. Rising antimicrobial resistance has been documented worldwide. For example, resistance to [tuberculosis](#) drugs is a formidable obstacle to fighting a disease that causes around 10 million people to fall ill, and 1.6 million to die, every year. In 2017, around 600,000 cases of tuberculosis<sup>30</sup> were resistant to rifampicin – the most effective first-line drug – and 82% of these people had multidrug-resistant tuberculosis. Drug resistance is driven by the overuse of antimicrobials in people, but also in animals, especially those used for food production, as well as in the environment.<sup>31</sup>

According to The Global Antimicrobial Resistance and Use Surveillance System (GLASS) “For common bacterial infections, including urinary tract infections, sepsis, sexually transmitted infections, and some forms of diarrhea, high rates of resistance against antibiotics frequently used to treat these infections have been observed world-wide, indicating that we are running out of effective antibiotics. For example, the rate of resistance to ciprofloxacin, an antibiotic

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<sup>28</sup> *Global Action Plan on Antimicrobial Resistance*, n.d.

<sup>29</sup> *WHO Strategic Priorities on Antimicrobial Resistance*, 2022

<sup>30</sup> *Tuberculosis*, 2021

<sup>31</sup> *Advancing the One Health Response to Antimicrobial Resistance (AMR)*, 2021

commonly used to treat urinary tract infections, varied from 8.4% to 92.9% for *Escherichia coli* and from 4.1% to 79.4% for *Klebsiella pneumoniae* in countries reporting to GLASS."<sup>32</sup>

#### **KELEBSILLA:**

*The rise in antimicrobial resistant Kelebsilla Is a particularly important issue as Klebsiella pneumoniae* are common intestinal bacteria that can cause life-threatening infections in the respiratory and circulatory systems, particularly in vulnerable populations like infants, the elderly, and those receiving acute medical care. The WHO states that "resistance in *K. pneumoniae* to last resort treatment (carbapenem antibiotics) has spread to all regions of the world. *K. pneumoniae* is a major cause of hospital-acquired infections such as pneumonia, bloodstream infections, and infections in newborns and intensive-care unit patients. In some countries, carbapenem antibiotics do not work in more than half of the patients treated for *K. pneumoniae* infections due to resistance."<sup>33</sup>

#### **FURTHER HEALTH CHALLENGES:**

These issues are not isolated to *Klebsiella*. Resistance to fluoroquinolone antibiotics in *E. coli*, used for the treatment of urinary tract infections, is widespread. Healthcare systems in countries throughout the world see this treatment at present as ineffective in more than half of their patients. More potent antimicrobial medicines and treatments have also seen similar decreases in efficacy. Colistin is the only last resort treatment for life-threatening infections caused by carbapenem-resistant Enterobacteriaceae (i.e. *E. coli*, *Klebsiella*, etc). Bacteria resistant to colistin have also been detected in several countries and regions, causing infections for which there is no effective antibiotic treatment at present.<sup>34</sup>

Further issues of Antimicrobial resistance include the bacteria *Staphylococcus aureus*. *Staphylococcus aureus* is part of our skin flora and is also a common cause of infections both in the community and in healthcare facilities. People with methicillin-resistant *Staphylococcus aureus* (MRSA) infections are 64% more likely to die than people with drug-sensitive infections.<sup>35</sup>

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<sup>32</sup> *Antimicrobial Resistance, 2021*

<sup>33</sup> *Antimicrobial Resistance, 2021*

<sup>34</sup> *Antimicrobial Resistance, 2021*

<sup>35</sup> *Antimicrobial Resistance, 2021*

## **THE NEED FOR COORDINATED ACTION:**

Due to the complexity and range of antimicrobial resistance, a united, global, multisectoral approach is needed. The WHO's One Health approach<sup>36</sup> brings together multiple sectors and stakeholders to tackle the issue of antimicrobial resistance by addressing how AMR can spread through the food chain and the environment. One Health stresses the crucial roles that the food, agriculture, and environmental sectors play in preventing infections and the further development and spread of AMR diseases. Sectors such as human health, animal health, plant health, food production, feed production, and the environment all need to collaborate and work together in the design and implementation of programs, policies, legislation, and research to attain better public health outcomes.

The WHO believes that greater innovation and investment are required in operational research and in the research and development of new antimicrobial medicines, vaccines, and diagnostic tools, especially those that target the critical gram-negative bacteria such as carbapenem-resistant Enterobacteriaceae and *Acinetobacter baumannii*. The launch of the Antimicrobial Resistance Multi-Partner Trust Fund (AMR MPTF), the Global Antibiotic Research & Development Partnership (GARDP), AMR Action Fund, and other funds and initiatives could fill a major funding gap. Various governments are piloting reimbursement models, including Sweden, Germany, the USA and the United Kingdom. More initiatives are needed to find lasting solutions."<sup>37</sup>

## **ACTION BEING TAKEN:**

The UN and WHO have taken action against Antimicrobial Resistance by adopting Resolutions such as WHA72.5, WHA67.25, the strategic priorities, and the Global action plan. In May 2014 World Health Assembly (WHA) adopted resolution WHA67.25 on antimicrobial resistance.<sup>38</sup> Following this resolution, in May 2015, World Health Assembly adopted a global action plan on antimicrobial resistance (GAP),<sup>39</sup> which outlines five objectives:

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<sup>36</sup> *Advancing the One Health Response to Antimicrobial Resistance (AMR)*, 2021

<sup>37</sup> *Antimicrobial Resistance*, 2021

<sup>38</sup> WORLD HEALTH ASSEMBLY, 2014

<sup>39</sup> *Global Action Plan on Antimicrobial Resistance*, n.d.

- 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 optimize 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.<sup>40</sup>

The WHO believes that, “with this approach, the main goal of ensuring treatment and prevention of infectious diseases with quality-assured, safe and effective medicines is achievable.”<sup>41</sup>

During the 2015 World Health Assembly, countries around the globe committed to the framework set out in the Global Action Plan (GAP)<sup>42</sup> on AMR and committed to the development and implementation of multisectoral national action plans. The GAP was subsequently endorsed by the Governing Bodies of the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (OIE). To ensure global progress, countries need to ensure the funding and implementation of national action plans across sectors to ensure sustainable progress. Prior to the endorsement of the GAP in 2015, global efforts to contain AMR included the WHO global strategy for containment of Antimicrobial Resistance developed in 2001, which provides a framework of interventions to slow the emergence and reduce the spread of AMR.<sup>43</sup>

### **The Global Antimicrobial Resistance and Use Surveillance System (GLASS)<sup>44</sup>**

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<sup>40</sup> *Global Action Plan on Antimicrobial Resistance*, n.d.

<sup>41</sup> *Global Action Plan on Antimicrobial Resistance*, n.d.

<sup>42</sup> *Global Action Plan on Antimicrobial Resistance*, n.d.

<sup>43</sup> *Antimicrobial Resistance, 2021*

<sup>44</sup> *Global Antimicrobial Resistance and Use Surveillance System (GLASS)*, n.d.

In 2015 WHO launched the Global Antimicrobial Resistance and Use Surveillance System (GLASS) to continue filling knowledge gaps and to inform strategies at all levels. GLASS has been conceived to cumulatively incorporate data from surveillance of AMR in humans, surveillance of the use of antimicrobial medicines, AMR in the food chain and in the environment. GLASS provides a standardized approach to the collection, analysis, interpretation and sharing of data by countries, territories and areas, and monitors the status of existing and new national surveillance systems, with emphasis on representativeness and quality of data collection. Some WHO regions have established surveillance networks that provide technical support to countries and facilitate enrollment into GLASS.

### **Tripartite Joint Secretariat on Antimicrobial Resistance**

The political declaration at the UN High-Level Meeting on AMR, committed to by Heads of State at the United Nations General Assembly in New York in September 2016, confirmed a strong focus on a broad, coordinated approach that engages all, including the human, animal, plant and environmental health sectors. WHO continues to work closely with FAO and OIE in a 'One Health' approach to promote best practices to reduce the levels of AMR and slow its development.

The Interagency Coordination Group (IACG) on AMR was convened by the Secretary-General of the United Nations after the UN High-Level Meeting on Antimicrobial Resistance in 2016.<sup>45</sup> The IACG brought together partners across the UN, international organizations and individuals with expertise across human, animal and plant health, as well as the food, animal feed, trade, development and environment sectors, to formulate a plan for the fight against antimicrobial resistance. The Interagency Coordination Group on AMR submitted its report "[No time to wait: Securing the future from drug-resistant infections](#)"<sup>46</sup> to the UN Secretary-General in April 2019. Its recommendations are now being implemented.

A tripartite joint secretariat (FAO, OIE and WHO) has been established and is hosted by WHO to drive multi-stakeholder engagement in AMR. The key governance structures agreed

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<sup>45</sup> *Interagency Coordination Group on Antimicrobial Resistance*, UN Secretary-General, 2017

<sup>46</sup> *No Time to Wait: Securing the Future From Drug-Resistant Infections*, 2019

include the Global Leaders Group on AMR, which began its work in November 2020, the Independent Panel on Evidence for Action against AMR<sup>47</sup> and the Multi-Stakeholder Partnership Platform, both of which are in the process of being established.<sup>48</sup>

### **World Antimicrobial Awareness Week (WAAW)<sup>49</sup>**

WAAW was previously called World Antibiotic Awareness Week. Since 2020, it has been called World Antimicrobial Awareness Week. This reflects the broadened scope of WAAW to include all antimicrobials including antibiotics, antifungals, antiparasitics and antivirals. Held annually since 2015, WAAW is a global campaign that aims to raise awareness of antimicrobial resistance worldwide and encourage best practices among the general public, health workers and policymakers to slow the development and spread of drug-resistant infections. The Tripartite Executive Committee decided to set all future WAAW dates as 18 to 24 November. The overarching slogan used for the last 5 years was “Antibiotics: Handle with Care.” This was changed to “Antimicrobials: Handle with Care” in 2020.<sup>50</sup>

### **Global Research and Development priority setting for AMR**

In 2017, to guide research and development into new antimicrobials, diagnostics, and vaccines, WHO developed the WHO priority pathogens list.<sup>51</sup> It will be updated in 2022. On an annual basis, WHO reviews the pre-clinical and clinical antibacterial pipelines to see how the pipeline is progressing with respect to the WHO priority pathogens list. A critical gap remains in research and development, in particular for the antibacterial targeting of the gram-negative carbapenem-resistant bacteria.<sup>52</sup>

### **Global Antibiotic Research and Development Partnership (GARDP)**

The Global Antibiotic Research and Development Partnership (GARDP) strategy is a five-year road map for developing new and improved treatments for drug-resistant infections. The strategy sets out priorities for how partners can develop treatments for the infections posing the greatest threat

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<sup>47</sup> *Advisory Group for the Independent Panel on Evidence for Action Against Antimicrobial Resistance, 2020*

<sup>48</sup> *Antimicrobial Resistance, 2021*

<sup>49</sup> *18-24 November World Antimicrobial Awareness Week, n.d.*

<sup>50</sup> *Antimicrobial Resistance, 2021*

<sup>51</sup> *WHO Publishes List of Bacteria for Which New Antibiotics Are Urgently Needed, 2017*

<sup>52</sup> *Antimicrobial Resistance, 2021*



to health and make those treatments sustainably and responsibly available to every person who needs them.

GARDP is a not-for-profit global partnership developing treatments for drug-resistant infections that pose the greatest threat to health.<sup>53</sup> GARDP works across sectors to ensure equitable access to treatments and promote their responsible use.<sup>54</sup>

### **Ten Threats to Global Health**

In 2019 World Health Organization began its new 5-year strategic plan – the 13th General Programme of Work.<sup>55</sup> This plan focuses on a triple billion target: ensuring 1 billion more people benefit from access to universal health coverage, 1 billion more people are protected from health emergencies and 1 billion more people enjoy better health and well-being.<sup>56</sup> In this plan, the World Health Organization outlined ten threats to global health. Antimicrobial resistance was one of those threats. In the ten threats to global health, the World health organization warns that AMR “threatens to send us back to a time when we were unable to easily treat infections such as pneumonia, tuberculosis, gonorrhoea, and salmonellosis.”<sup>57</sup>

### **A National Approach**

Many nations have set up their own responses to the Antimicrobial resistance issue. One example of this is the United States and Its Center for Disease Control (CDC). The United States and the CDC have been committed to the fight against anti-microbial resistance since the CDC released the first [Antibiotic Resistance Threats Report](#)<sup>58</sup> in 2013 to look at the burden and threats to human health posed by antimicrobial resistance in the U.S., which brought attention to the threat and prompted the government and industry leaders to take immediate action. Since then, the US has taken many actions and put forward national plans such as the [U.S. National Strategy for Combating Antibiotic-Resistant Bacteria](#),<sup>59</sup> hosting the [Forum on Antibiotic Stewardship](#) in 2014,<sup>60</sup>

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<sup>53</sup> GARDP, n.d.

<sup>54</sup> *Antimicrobial Resistance*, 2021

<sup>55</sup> *Thirteenth General Programme of Work 2019-2023*, n.d.

<sup>56</sup> *World Health Organization*, n.d.

<sup>57</sup> *World Health Organization*, n.d.

<sup>58</sup> *2019 Antibiotic Resistance Threats Report*, CDC, n.d.

<sup>59</sup> *U.S. National Action Plan on Combatting Antibiotic Resistant Bacteria*, CDC, n.d.

<sup>60</sup> *White House Forum on Antibiotic Stewardship*, CDC, n.d.

establishing the [Antimicrobial Resistance Laboratory Network](#) (AR Lab Network) to support nationwide lab capacity, and funding local antimicrobial resistance experts in every state, major cities, and Puerto Rico,<sup>61</sup> and launching the Antimicrobial Use and Resistance Module to report and analyze antibiotic use in healthcare facilities through the [National Healthcare Safety Network](#) (a national healthcare infection tracking system).<sup>62</sup> The President issued an Executive Order to continue advisory committees, including the PACCARB, reflecting the administration's commitment to combating antimicrobial resistance, and many more programs and actions beyond the ones listed.<sup>63</sup>

### **Questions to consider**

1. What specific strategies, policies, or contributions can States implement to help prevent antimicrobial resistance?
2. How can States and non-governmental organizations better communicate and collaborate to help mitigate and come up with effective solutions for the growing antimicrobial resistance?
3. What can States or non-governmental organizations do today to help prevent the spread of antimicrobial-resistant diseases?
4. How can States, non-governmental organizations, healthcare facilities, and academics best communicate with each other to promote further development and solutions to the AMR issue?
5. How can States best apply a "One Health" approach to produce sustainable results?

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<sup>61</sup> *What CDC Is Doing: Lab Capacity*, CDC, n.d.

<sup>62</sup> *NHSN*, CDC, n.d.

<sup>63</sup> *U.S. Action to Combat Antibiotic Resistance*, CDC, n.d.

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