

Committee Overview

The World Health Organization (WHO) is the directing and coordinating authority on international health-care issues within the United Nations (UN) system, promoting the attainment of the highest possible level of health by all people. WHO intervenes within six intersecting areas of work to assist its 194 Member States in the development of their respective health systems; the eradication of non-communicable diseases (NCDs); the promotion of good lifelong health; the prevention, treatment, and care of communicable diseases; the preparedness, surveillance, and response with respect to international health emergencies; and the extension of corporate services to the organization's public and private partners.

At OSMUN 2020, we are simulating the Executive Board of WHO in terms of composition and size; however, delegates are not limited to the strict mandate of the Executive Board during the conference. For the purposes of OSMUN, and corresponding with the educational mission of the conference, the committee has the ability to make programmatic and policy decisions on issues within the mandate of WHO in line with the overall function of the organization.

WHO is guided by the principle that health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. Outlined in the *Constitution of the World Health Organization* (1946), this principle was adopted in July 1946 by the then 51 UN Member States and 10 additional states. After a complete breakdown of international health cooperation during World War II, an Interim Commission continued the activities of existing health institutions such as the Health Organisation of the League of Nations. Following a proposal by various Member States during the San Francisco conference that set the foundation for the UN in April 1945, the creation of an international health organization was signed by 61 members, however, its constitution only came into force when 26 of those Member States ratified it in 1946. After entering into force in April 1948, the World Health Assembly (WHA), the organization's decision-making body comprised of all WHO Member States, convened in Geneva on 24 June 1948 for the first time. Although WHO had largely remained a driving force for health research throughout its first decade, its operative programs gradually expanded in the following years. The adoption of a resolution by WHA on a "Smallpox Eradication Programme" marks the organization's first global immunization campaign, which eventually succeeded in eliminating the disease in 1980. Another defining moment for WHO was the 1978 International Conference on Primary Health Care, which declared access to primary health care for all as the organization's key strategic objective and linked health to social and economic development.



Governance, Structure, and Membership

WHO's membership is comprised of 194 Member States, all of whom are UN Member States except for the Cook Islands and Niue. While WHO Secretariat's headquarters is located in Geneva, Switzerland, the organization maintains a worldwide presence, staffing six regional offices across the globe and

operating a total of 150 country offices and decentralized sub-offices. WHO's executive functions are assigned to its Executive Board, which comprises 34 experts in the field of health, each appointed for a three-year term by a WHO Member State elected by WHA with respect to population per region proportions. The Board's key policymaking functions include the drafting of multiannual programs of work as well as submitting draft resolutions to WHA for consideration. In formulating WHO policies, the Executive Board's Programme, Budget and Administration Committee (PBAC) plays an important role, as it makes recommendations with regard to planning, monitoring, and evaluation of WHO programs, and the organization's financial and administrative management. The PBAC consists of 14 board members, with two members from each region elected by the Executive Board for a two-year period. Furthermore, the Executive Board endorses decisions and policies of WHA and coordinates response efforts to international health emergencies. The Executive Board meets at least twice a year, once in January and once in May after the WHA's annual convention. The Board also holds special sessions in the event of an international health emergency or issue of international importance, most recently in an effort to work on the draft *Thirteenth General Programme of Work 2019–2023* (2018).

In addition to the determination of WHO's policies, the Assembly supervises the organization's financial policies, adopts its budget, and appoints the Director-General on the nomination of the Executive Board. WHO's Director-General acts as chief technical and administrative officer with the support of the secretariat's administrative staff. The Director-General also serves as the ex officio secretary of WHA, the Executive Board, as well as the organization's commissions and committees, and is responsible for submitting WHO's financial statements and budget estimates to the Executive Board. Dr. Terdros Adhanom Ghebreyesus is the current Director-General of WHO, succeeding Dr. Margaret Chan who had held the position during the previous 10 years. Before the end of her term as WHO's Director-General, Dr. Chan published a report titled *Ten years in public health 2007-2017*, which addresses the setbacks, achievements, and progress during her time in office. The current Director-General's vision reinforces the importance of Sustainable Development Goals (SDGs) in improving global health and well-being by focusing on health rights for all people and by giving health the central role in international agendas.

WHO's biennial program budgets derive from its multiannual programs of work, and are funded through a combination of assessed and voluntary contributions. Assessed contributions are those coming from dues paid by Member States in order to keep their membership status. Voluntary contributions are made by state and non-state contributors, such as non-governmental organizations (NGOs), private sector, philanthropic foundations, and academic institutions. Historically, most of WHO's funding has been constituted by assessed contributions, but since 1990 voluntary contributions have increased and now represent the majority of the income. For the 2018-2019 biennial program, the Director-General proposed a 3% increase in assessed contributions to achieve complete funding of the program budget.

In May 2011, the Executive Board launched a Member State-led reform to transform WHO into a more effective and efficient, transparent, and accountable organization. The reform addresses three core areas – programs and priority setting, governance, and management – and tackles a wide range of issues relating to accountability, human resources, evaluation, and communication. The governance reform examines WHO governing bodies’ working methods, engagement practices with external stakeholders, and ultimately the organization’s governance role in the global community on issues relating to health. In terms of the financial reform, the Programme Budget 2018-2019 replaces preapproved funding for crisis response with planning and budgeting at the time of emergency, and adjusts resource allocation for areas that attract less donor interest.

Mandate, Functions, and Powers

WHO’s constitution established the organization as a specialized agency of the UN in accordance with Article 57 of the *Charter of the United Nations* (1945). Notwithstanding its status as an autonomous organization within the UN system, WHO operates within the purview of the UN Economic and Social Council (ECOSOC). Accordingly, WHA reports to ECOSOC concerning any agreement between the organization and the UN. Furthermore, WHO’s Director-General is the official representative of international health efforts across a broader range of policy areas. As such, the Director-General is a key member of the UN System Chief Executive Board for Coordination, which comprises the 29 executive heads of the UN including its funds and programs, the specialized agencies, and subsidiary bodies.

Article 2 of WHO’s constitution mandates the organization to foster mental, maternal, and child health, and to provide information, counsel, and assistance in the field of health. The mandate defines WHO’s role in advancing the eradication of diseases, coordinating and directing international health programs and projects, as well as improving nutrition, sanitation, and other conditions. WHO is also responsible for advancing medical and health-related research; promoting scientific collaboration; improving standards of training in health, medical, and related professions; as well as developing international standards for food, biological, pharmaceutical, and similar products.

WHO carries out various projects, campaigns, and partnerships, addressing a wide range of health topics. Furthermore, WHO’s programs may operate on global, regional, and country levels simultaneously. WHO plays an important role in resolving crises of Member States, offering support at levels of country offices, regional offices, and headquarters through the network for Emergency Risk Management and Humanitarian Response. WHO’s activities during outbreaks are also often complemented by the work of the Global Outbreak Alert and Response Network, a coalition of Member States’ scientific institutions, medical and surveillance initiatives, regional technical networks, the United



Nations Children's Fund (UNICEF), the Office of the United Nations High Commissioner for Refugees (UNHCR), the Red Cross, and other humanitarian NGOs.

WHO also assumes a norm- and standard-setting function to help states prevent the outbreaks of public health issues, most notably via promoting the implementation of the *International Health Regulations* (IHR), which were adopted by WHA resolution 58.3 "Revision of the International Health Regulations" on 23 May 2005. The need for strengthening states' diseases surveillance capacities has become salient following a resurgence of several epidemic diseases in the 1990s such as cholera and plague. The IHR legally binds 196 states, including all WHO Member States, setting standards for the prevention and response to acute, cross-border public health risks.

The promotion of health-related research plays a central role in advancing global health and provides benefits across WHO's work areas. Acknowledging this, WHA adopted the *WHO Strategy on Research for Health* (2012), which aims to enhance cooperation between WHO's secretariat, Member States, health practitioners, and researchers to reinforce research on Member States' priority health needs and strengthen national capacities for health research. Another key contribution by WHO is the systematic collection, analysis, and interpretation of health-related data via the organization's Global Health Observatory Data Repository and its annual *World Health Statistics Reports*.

In order to promote international health, WHO partners with other UN bodies such as the Joint United Nations Programme on HIV/AIDS (UNAIDS), as well as external public entities, NGOs, and private sector actors. Most notably, WHO leads the Global Health Cluster (GHC), which comprises 48 partners, including UN bodies as well as public stakeholders and academic institutions. Aiming to minimize the health impacts of humanitarian emergencies, GHC partners collaborate to foster global capacities for emergency preparedness, response, and recovery from humanitarian health crises. WHO also sustains different approaches, initiatives, alliances, and global networks that target different areas of life-course issues such as health of women before, during, and after pregnancy; health of newborns, children, adolescents, and older people; and environmental risks to health.

Recent Sessions and Current Priorities

The 142nd Executive Board meeting in January 2018 included conversations on WHO's public health preparedness and response; polio transition planning; and the relationship between health, environment and climate change. At the UN Climate Change Conference (COP 23) hosted in Bonn, Germany in November 2017, WHO partnered with the Secretariat of the *United Nations Framework Convention on Climate Change* (UNFCCC) (1992) to introduce a special initiative that raises awareness about the health impacts of climate change, especially on those living in Small Islands Developing States (SIDS). As a result of this initiative, in March 2018, WHO co-hosted with the governments of Fiji, Mauritius, and

Grenada the Third Global Conference on Climate and Health to accelerate health efforts in SIDS, who are especially vulnerable to climate change impacts.

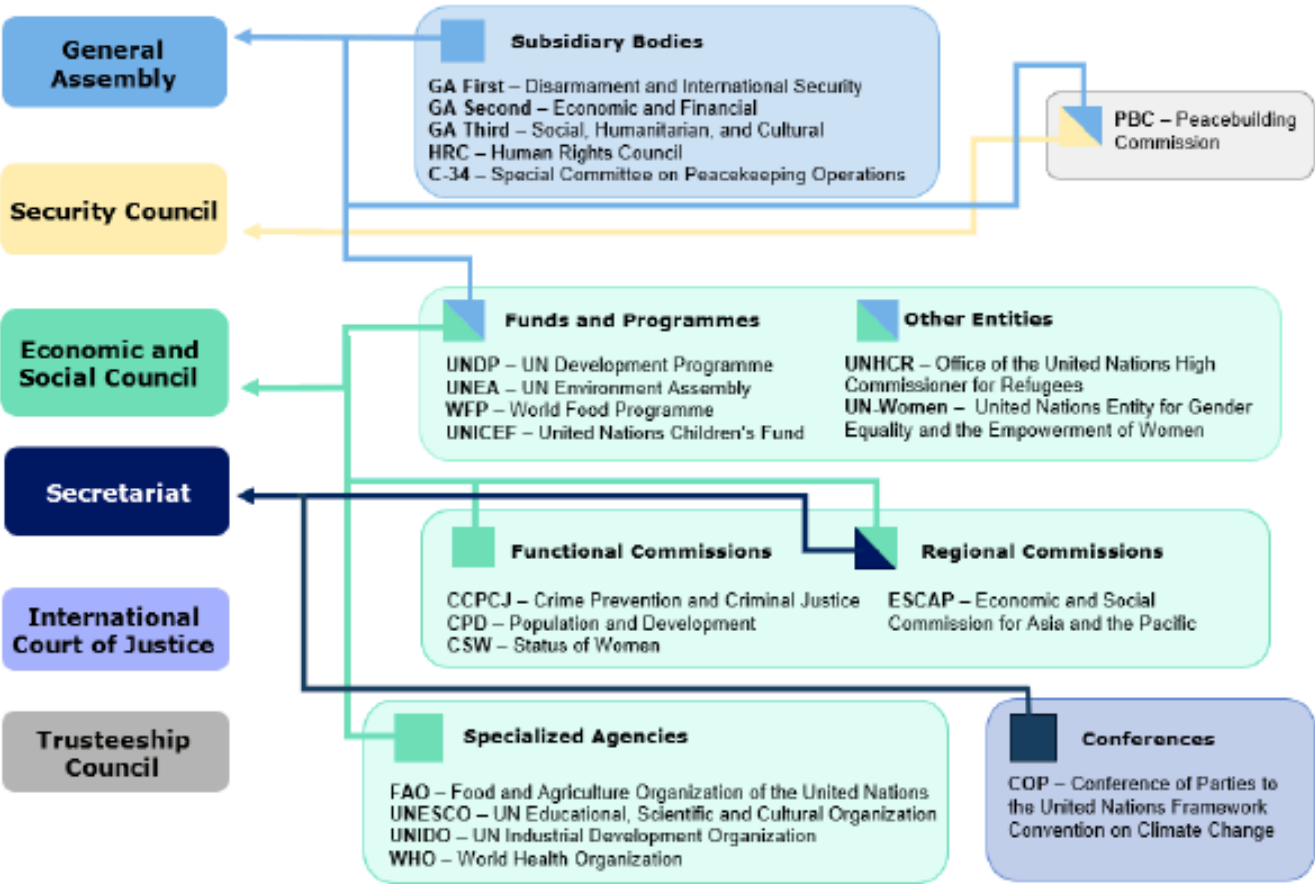
At the seventy-first session of the WHA in May 2018, the Assembly adopted resolutions that reaffirm the organization's commitment to the SDGs, especially SDG 3, which stresses the importance of good health and well-being. Furthermore, during the same session, the WHA adopted the *Thirteenth General Programme of Work 2019-2023*, which defines the organization's current priorities. According to this document, WHO's work will focus on promoting IHR's implementation, improving access to medical products, furthering action on social determinants of health, advancing universal health coverage, addressing the challenge of NCDs, and shaping WHO's role in achieving the SDGs. The 143rd Executive Board meeting that same month discussed, among other things, the evaluation of WHO-hosted partnerships, the progress in international classification of diseases, and the WHO governance reform.

During the last year, WHO has been in the frontline of addressing and providing aid in different areas to assist Member States affected by dozens of disease outbreaks and other pressing international crises that have taken place all around the world. Diseases that had been nearly eradicated and could be preventable through vaccines, such as diphtheria and cholera, have made a comeback and threaten the lives of millions of people around the globe, especially those in vulnerable communities. Another serious challenge faced by the international community and WHO has been the outbreak of the Ebola virus disease in the Democratic Republic of the Congo with 73 total cases and approximately 43 deaths as of August 2018. Malnutrition, natural hazards, and access to health in situations of conflict are other threats to global health that have predominated recently. As outbreaks and epidemics keep occurring all over the world, WHO continues working to keep the world safe from health threats, especially those who are most vulnerable.

Conclusion

WHO is the coordinating authority on international health-care issues within the UN system. As the executive body responsible for the formulation and review of WHO's policies, the Executive Board assumes a key responsibility in addressing current health priorities through the preparation of draft resolutions considered by WHA. The global state of health is ever-changing and increasingly complicated, requiring strategic, creative, and unique solutions that adapt to local conditions and situations. In light of persistent challenges across the priorities highlighted above, delegates are expected to develop effective solutions to address challenges to health, and to achieve the health objectives set forth by the SDGs.

This diagram illustrates the UN system simulated at OSMUN 2020 and demonstrates the reportage and relationship between entities. Examine the diagram alongside the Committee Overview to gain a clear picture of the committee’s position purpose and powers within the UN system.



Annotated Bibliography

World Health Organization. (2014). *Basic Documents: 48th ed. Including amendments adopted up to 31 December 2014*. Retrieved 4 September 2018 from: http://apps.who.int/gb/bd/PDF/bd48/basic_documents-48th-edition-en.pdf

This document published by WHO compiles the organization's founding documents and accompanying legal provisions. It includes WHO's constitution, provides information on its governing bodies' rules and procedures, and specifies WHO's agreements with other intergovernmental and NGOs. Furthermore, the document specifies the legal provisions on WHO's financial administration. The document provides delegates with an encompassing overview of WHO's legal framework and details on the formal mandate for the organization's operations.

World Health Organization (2017). *Programme Budget 2018-2019* [Report]. Retrieved 7 July 2018 from: http://www.who.int/about/finances-accountability/budget/PB2018-2019_en_web.pdf?ua=1

This report offers a summary of WHO's budget for the current biennial term, as well as how the funds and contributions will be allocated depending on health topics, categories, and regions of work. It provides an overview on the different areas where financial support has increased or decreased, and what areas of work/regions need the most help. This document will be helpful for delegates seeking to gain a broader understanding of WHO's current priorities and allocation of its funds.

World Health Organization. (2018). *About WHO* [Website]. Retrieved 7 July 2018 from: <http://who.int/about/en/>

This section of WHO's website provides delegates with access to comprehensive information on the organization's history and structure, WHO's main areas and locations of work, as well as background information on its governing bodies and WHO's cooperation with other organizations. The website represents a key resource for delegates to get a quick overview not only on WHO's formal structures and history, but also on its role in the UN system and its work with Member States. While information provided on the website is fairly general, its sub-sections contain helpful links to more specific sources of information on the topics outlined above.

World Health Organization (2018). *Documents from the Seventy-first World Health Assembly* [Website]. Retrieved 7 July 2018 from: <http://www.who.int/world-health-assembly/seventy-first>

This website provides a list of the outcome documents and resolutions of the 71st World Health Assembly, which took place between 21 and 26 May 2018 in Geneva, Switzerland. This list includes important reports concerning the IHR, public health preparedness, and global shortage of medicines and vaccines. It further contains an action plan related to WHO's current priorities, which will be relevant during the conference and useful for delegates throughout their research.

World Health Organization (2018). *Draft Thirteenth General Programme of Work 2019-2023: Report by the Director-General (A71/4)*. Retrieved 7 July 2018 from: http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_4-en.pdf?ua=1

In its 71st session, the World Health Assembly approved the Thirteenth General Programme of Work. This document is the report from the Director-General, which highlights the agency's current priorities as well as challenges in terms of international health. Furthermore, it emphasizes how the current WHO strategic priorities are linked to the SDGs, such as advancing universal health coverage, addressing health emergencies, and promoting healthier populations. This source will serve as a great foundation for delegates in their research when it comes to understanding WHO's importance and relevant areas of work concerning the topics discussed at the conference.

I. Maintaining National Safeguards & International Cooperation in a Pandemic

Introduction

Every month, the World Health Organization (WHO) encounters 5,000 or more disease outbreak indications globally, where about 300 of them require further investigation to determine the severity of the epidemic's threat to global health. According to WHO, an epidemic is described as an "occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy." Furthermore, if an epidemic involves several states or continents, it becomes a pandemic, and, if it recurs regularly in one area due to favorable conditions, it can be described as endemic. Additionally, it is important to identify that an outbreak is "the occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area or season," and therefore similarities exist between the concepts of an epidemic and an outbreak.

Over the course of history, there have been different outbreaks and epidemics that often had disastrous consequences, but also taught the international community valuable lessons on how to manage and create resilience against such diseases. Smallpox has been one of the first recorded infections that affected large populations of people. The next large-scale epidemics were the different forms of plague, which started to widespread in the 5th century and since then continued to effect large parts of the world. In the 14th century, Europe lost about 25 million people only because of this disease. After the end of World War I, between 1918 and 1919, the influenza, or commonly known as the Spanish flu, is estimated to have killed between 30 and 50 million people. Other notable epidemics and outbreaks over the course of history have been the yellow fever, polio, HIV/AIDS, SARS, and swine flu. As one of the most recent epidemics, the Ebola virus disease (EVD) peak outbreak occurred between 2014 and 2016 with most of the cases being in Central and West Africa. The most recent statistics from September 2018 state that there have been a total of 140 cases of the disease in Democratic Republic of Congo (DRC), resulting in 94 fatalities and indicating that the epidemic is still ongoing. WHO is conducting various activities to manage and respond to this and other outbreaks.

Despite the historic outlook and the ability to overcome all epidemics, the international community still faces challenges in terms of building resilience against these outbreaks. Resilience is defined as the "capacity to recover quickly from difficulties," and, in the epidemics context, it means the strengthening of capabilities of health institutions, health-care workers, and local communities to deal with health risks, as well as quick response in emergencies to provide medications and health services in a timely manner. The following sections will address the fundamental frameworks surrounding the strengthening of resilience against outbreaks and epidemics, along with the role of United Nations (UN) bodies, non-governmental organizations (NGOs), and other entities in this regard. Next, the short- as well as long- term responses to health emergency crises and related resilience development solutions will be

discussed. Lastly, the example of the Ebola outbreak in 2014 will be used to understand the successes, failures, and challenges in striving to strengthen resilience against global outbreaks and epidemics.

International and Regional Framework

The right to health was first introduced in the 1946 *Constitution of the World Health Organization*, which defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” The 1946 constitution recognizes as one of the functions of WHO to “establish and maintain epidemiological and statistical services” as well as to “stimulate and advance work to eradicate epidemic, endemic and other diseases.” Article 25 of the *Universal Declaration of Human Rights* (1948) also states that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family,” underlying the importance of having health-care access as a universal right to every human being. Equitable access to health facilities, goods, and services becomes essential especially during outbreaks and epidemics.

In 1966, the UN General Assembly adopted the *International Covenant on Economic, Social and Cultural Rights* (ICESCR), which represented another step towards providing universal access to health-care to everyone. Of particular importance is Article 12, which states that “the States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.” Furthermore, Section 2 (c) suggests that the full realization of this right can only be achieved through effective steps aiming at the “prevention, treatment and control of epidemic, endemic, occupational and other diseases.”

Throughout the UN system, various agencies and organizational bodies have issued resolutions that address the topics of epidemics, disease outbreaks, and other health-related crisis. The World Health Assembly (WHA), which is the decision-making body of WHO, issued resolution 54.14 of 2011 on “Global Health Security: Epidemic Alert and Response” and resolution 51.17 of 1998 on “Emerging and other communicable diseases: antimicrobial resistance.” These resolutions call upon Member States to take action on preventative, control, and mitigation activities regarding epidemics and outbreaks.³¹⁹ In addition, they ask the Director-General of WHO to support all Member States with the necessary tools and information to achieve favorable outcomes in regions affected by epidemics and disease outbreaks.

In September 2015, the General Assembly adopted the *2030 Agenda for Sustainable Development* (2030 Agenda), which set 17 Sustainable Development Goals (SDGs) crucial for the advancement of the international efforts toward sustainable development in various areas. SDG 3 is specifically oriented toward global responsibility to ensure healthy lives and promote well-being among all people. Its target

3.3 focuses on ending epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases, and the fight against other communicable diseases.

Contrary to the SDGs, the *International Health Regulations* (IHR), which were adopted by the WHA in May 2005, are a legally binding instrument of the international law, currently binding 196 Member States including all WHO members. The main purpose of the IHR is to provide an international legal framework to help states globally to address various epidemics that have the possibility to spread and impact people across borders. The IHR require all states to inform WHO on the state of epidemics, outbreaks, and other health risks within their regions. This has become a crucial aspect of the IHR also due to the increasing migration and mobility of people worldwide. Diseases know no boundaries and, in order to limit their spread, the international community has recognized the importance of partnerships and relying on systematic actions that the IHR have provided. The IHR have also set up multiple emergency committees on various ongoing disease outbreaks, including the IHR Emergency Committee on Ebola and the IHR Emergency Committee on Zika virus. These emergency committees consist of advisors, researchers, and other relevant experts on the specific disease or geographic area, enabling exchange of valuable technical expertise as well as pooling of know-how and other resources.

Role of the International System

The international system regarding building resilience toward epidemics and disease outbreaks is built around WHO as the central, governing organization in this field. WHO's main purpose is to guide and organize efforts promoting health and universal well-being rights not only within the UN framework but also internationally. Regarding communicable diseases, WHO works closely with states affected by disease outbreaks by undertaking risk assessments; identifying priorities and setting strategies; providing critical technical guidance, medical supplies, and financial resources; as well as monitoring the health situation and helping them increase the availability of treatment. WHO also supports the affected states in developing long-term emergency response strategies that would allow them to react to disease outbreaks timely and effectively.

In order to successfully fulfill its functions related to epidemics and disease outbreaks, WHO has created several initiatives. First and foremost, the Emerging and Dangerous Pathogens Laboratory Network (EDPLN) includes global and regional networks of diagnostic laboratories for detecting pathogens in both humans and animals. This initiative allows for the detection of various pathogens possessing an epidemic potential, and thereby serves as a preparedness tool with regard to future outbreaks. Equally important is the Global Infection Prevention and Control (GIPC) Network, which is a practical and science-based initiative providing hygiene standards and procedures to be followed when interacting with patients. This initiative helps develop resilience against outbreaks and control the spread of diseases. Furthermore, Global Influenza Surveillance and Response System (GISRS) is an initiative that observes the development of influenza viruses, and offers support to those geographic

areas affected by outbreaks through providing vaccines, laboratory diagnostics, risk assessment, and other supportive elements. Similarly, the Pandemic Influenza Preparedness (PIP) framework helps Member States, WHO, and other stakeholders increase their readiness with regard to influenza outbreaks on a pandemic level. One of its main goals is to help developing countries access vaccines and other treatment supplies. Lastly, Emerging Diseases Clinical Assessment and Response Network (EDCARN) is an initiative providing technical expertise and operational activities regarding treatment, prevention, and research on emerging diseases, which serves to support Member States with resilience development.

The General Assembly, acting as a central policymaking and representative UN body, contributes not only to the creation of general policy frameworks, but also adopts resolutions in reaction to concrete outbreaks. One such example is resolution 69/1 of 2014, which supported the Secretary-General's intent to create the UN Mission for Ebola Emergency Response (UNMEER). Resolutions in reaction to outbreaks and epidemics are also often issued by the Security Council. Resolution 2177 of 2014 on "Peace and Security in Africa" recognized the Ebola outbreak in Africa as a threat to global security, and resolution 1983 of 2011 on "HIV epidemic" recognized the scale of the HIV/AIDS epidemic as a threat to international peace and security.

International NGOs that are profoundly embedded into the international health system strongly support the strengthening of resilience in areas affected by epidemics, disease outbreaks, and other health crises. Médecins Sans Frontières (MSF) is an international medical humanitarian organization, whose main aim is to provide health-care and medical support to communities and individuals affected by emergencies and epidemic outbreaks, especially those lacking access to health-care. In terms of resilience development to epidemics and outbreaks, MSF prioritizes raising awareness among the affected communities and strengthening of political will to offer global support to those most affected.

WHO conducts most of their actions regarding epidemics and disease outbreaks in cooperation with other partners, both UN agencies and non-UN actors. WHO recognized the necessity of having a reliable and diverse partnership system for being able to share resources and knowledge to build resilience strategies and to effectively and efficiently respond to the wide diversity of emergencies and health crises worldwide. In addition to WHO initiatives such as EDPLN, GIPCN, GISRS, PIP, and EDCARN, the organization has established additional partnerships that allow it to scale up its actions and be flexible in supporting resilience development activities. The Global Health Cluster (GHC) is a platform of more than 700 partnerships that are capable, on both local and global scale, of responding to health crises worldwide. Currently, 27 states have active Health Clusters that are helping more than 75 million people by coordinating technical, operative, and other supportive tasks in response to health

emergencies. WHO is the leading agency of the GHC. Standby Partnerships, consisting of experienced health-care and administrative experts, technicians, and other operative personnel, are of crucial importance in emergency situations when additional personnel needs to be deployed to the crisis locations to support WHO and the Health Cluster in their emergency response.

Long-Term Response: Resilience as a Prevention

Past and present epidemic and disease outbreaks have provided a foundation for WHO, other UN entities, NGOs, governments, and other stakeholders to create action plans that allow them to prevent and respond to such crises more effectively, including by strengthening the resilience of national health systems and local communities. One long-term solution comes from the lessons learned during the cholera outbreak in Cameroon in 2010. In reaction to this crisis, the United Nations Children's Fund (UNICEF) has suggested the use of an innovative methodology called Community-Led Total Sanitation (CLTS), which aims at eliminating open defecation and improving sanitation within the areas affected by epidemics and outbreaks. This approach sees the CLTS committee working together with local communities on building necessary hygiene infrastructure, as well as informing and educating people on the importance of proper sanitation to avoid further disease spread. Such a simple yet effective community-driven approach can teach local communities to take responsibility themselves for keeping a disease isolated in the long run. However, the CLTS also faces certain challenges that have slowed down the progress of distribution of this tool. Those challenges mostly originate from prevailing cultural norms and traditional living styles, which must be considered in order for an effective CLTS approach. In some cultures, it is not a practice to have sanitary facilities near homes, or certain relatives are not allowed to use the same facilities. Moreover, a recent study shows that in Zambia, unmarried women are having difficulties to have a latrine built because the cultural norms consider it as a man's duty. Another challenge is the suitability and durability of such facilities. Natural and ecological risks, such as flooding, ground water contamination, or soil erosion, pose risks to the resilience and sustainability of CLTS facilities.

WHO has also suggested the use of predictive modeling to predict future outbreaks. This technology creates linkages between historic evidence of occurrence of disease outbreaks and climatic conditions variability, which allows to predict the expected burden of epidemics and disease outbreaks under certain climate change scenarios. Predictive modeling is a relatively new concept, still being developed as a global epidemics and disease outbreaks resilience strengthening practice, and it is predicted that this method would provide more accurate results throughout time with the advance of technology. A leading challenge to this method is that different models can lead to the same outcome in one context, which may not be true in another context, thus undermining the reliability of the predictive modeling technology.

In crisis situations, it is crucial to have well-trained medical and technical personnel, volunteers, and other actors that are involved in the emergency risk management cycle. Training in various specialties, such as logistics, social care, and communication, allows the personnel to be more effective and efficient when it comes to dealing with an emergency and having it under control as soon as possible. For this purpose, in 2017, WHO set up the Training Task Team, which assembles coordinators of learning and training activities for personnel in the WHO headquarters and in all regional and country offices to prepare them for their involvement in emergencies. Additionally, WHO has established a Task Force on Education and Training, whose primary goal is to support Member States by providing training and educational activities to local health-care workers. Training and learning as a resilience strengthening practice can be improved by having more volunteers involved in the Training Task Team, enhancing the use of technology in trainings, increasing the availability of training in different languages, as well as scaling up trainings to real-life large emergencies.

One of the most sustainable approaches to building global resilience toward epidemics and disease outbreaks is through the promotion of education for communities and people in affected areas. Among the main reasons why Ebola outbreak in 2014-2016 in West Africa spread so quickly was a lack of information on how people should react to the situation and protect themselves. WHO has recognized the challenge of lacking information, and has therefore been utilizing tools such as OpenWHO, an online learning platform, and Risk Communication, which serves the exchange of vital information during a disease outbreak situation. Progress in this area has been stagnating due to long-time duration and high costs associated with implementing such effective educational tools.



Short-Term Response: Immediate Reaction

Short-term responses to outbreaks require immediate action to limit the further spread of epidemics and other diseases. Vaccination was among the first reactions to preventing the emergence and further spread of epidemics and disease outbreaks. The International Coordinating Group (ICG) on Vaccine Provision, which was set up in 1997, provides emergency vaccine supplies and antibiotics to states suffering from disease outbreaks. The ICG's primary purpose is rapid deployment of vaccines to outbreak areas, but it also helps coordinate efforts on epidemic preparedness and response. The ICG provides vaccines for various diseases such as cholera, meningitis, and yellow fever.

Another actor focusing on short-term response to outbreaks and epidemics is the WHO unit on Disease Control in Humanitarian Emergencies (DCE), whose main purpose is to reduce mortality and morbidity caused by communicable diseases in regions affected by an emergency. The DCE provides operational and technical assistance in field epidemiology, such as surveillance, monitoring, and training. Furthermore, the DCE issues technical standards, guidelines, and tools to be used by experts and health-care practitioners in field. The main purpose of setting standardized instructions is to have effective and coordinated activities toward disease prevention and control. A related challenge to this is keeping the instructions and manuals updated to new diseases so that response actions can be adjusted and implemented accordingly.

Risk communication, which involves an exchange of real-time information between people in health risk situations and experts that can provide them with advice, is considered to be another short-term resilience strengthening solution because it allows people to make informed decisions to protect themselves. Risk communication uses various communication channels, such as social media, mass media, and community engagement. A significant benefit of this approach is that it is flexible and can be applied in any disease outbreak emergency.

Strengthening protection and resilience of health workers is another priority of the UN and WHO that allows for effective short-term response to health emergencies. One of the main areas of focus is providing training to health-care workers that would equip them with knowledge and instructions on how to protect themselves while treating others. In 2018, WHO, together with the International Labour Organization (ILO) released a publication titled *Occupational safety and health in public health emergencies: A manual for protecting health workers and responders*, which instructs health-care workers on how to protect themselves and others during outbreak emergencies.

Nevertheless, short-term responses also face certain challenges, the most serious being a lack of immediate allocation of financial and personal resources. WHO's budget for the fiscal year 2018/2019 is about \$4.4 billion, which is the amount dedicated for various health-related activities throughout the world. In comparison, the United States Center for Disease Control had an annual budget of \$6 billion in 2018 for a population of 325.7 million people. Moreover, more than half of WHO's budget comes from voluntary donations, which leaves it at risk of not having enough funds. Additionally, the international community is sometimes hindered in their efforts by the inability to recognize a disease outbreak or an epidemic in its early stage. This was the case with the Ebola outbreak in 2014 when the scale of the epidemic was observed relatively late and the disease had already spread. Lacking community engagement and openness to support as well as resentment by local community leaders can present health-care workers with additional challenges.

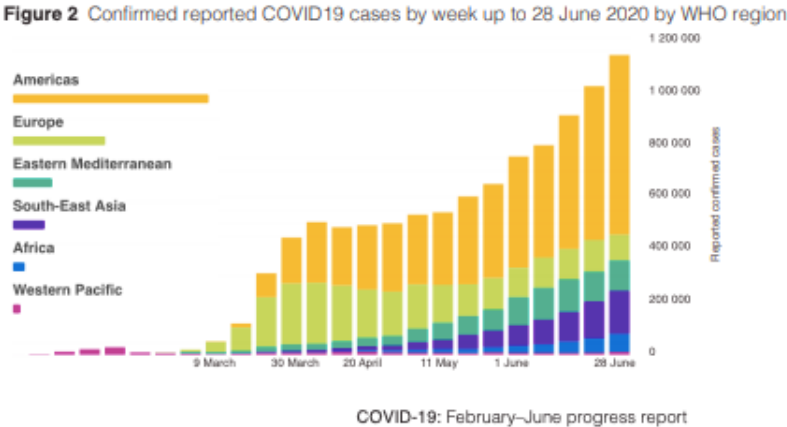
Case Study: COVID Outbreak

Coronaviruses are a large family of viruses, which may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease COVID-19. COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. COVID-19 is now a pandemic affecting many countries globally.⁴⁰⁶ The most common symptoms of COVID-19 are fever, dry cough, and tiredness. Other symptoms that are less common and may affect some patients include aches and pains, nasal congestion, headache, conjunctivitis, sore throat, diarrhea, loss of taste or smell or a rash on skin or discoloration of fingers or toes. These symptoms are usually mild and begin gradually. Some people become infected but only have very mild symptoms.

Most people (about 80%) recover from the disease without needing hospital treatment. Around 1 out of every 5 people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people, and those with underlying medical problems like high blood pressure, heart and lung problems, diabetes, or cancer, are at higher risk of developing serious illness. However, anyone can catch COVID-19 and become seriously ill. People of all ages can experience fever and/or cough associated with difficulty breathing/shortness of breath, chest pain/pressure, or loss of speech or movement. People can catch COVID-19 from others who have the virus. The disease spreads primarily from person to person through small droplets from the nose or mouth, which are expelled when a person with COVID-19 coughs, sneezes, or speaks. These droplets are relatively heavy, do not travel far and quickly sink to the ground. People can catch COVID-19 if they breathe in these droplets from a person infected with the virus.

This is why it is important to stay at least 1 meter) away from others. These droplets can land on objects and surfaces around the person such as tables, doorknobs and handrails. Touching these objects or surfaces can infect people, then touching their eyes, nose or mouth. This is why it is important to wash your hands regularly with soap and water or clean with alcohol-based hand rub.

Over 5000 patients in more than 20 countries have joined WHO’s Solidarity Trial, which will continue to answer questions about which treatments are most effective. More than 600 donor contributions have helped fund more than 108 COVID-19 national plans through the WHO Partners Platform. Through the end of June, the joint expertise and purchasing power of agencies brought together by the COVID-19 Supply Chain System had obtained 140 million items of personal protective equipment, 4.5 million laboratory test kits, and 5 million sample collection kits available for delivery throughout July and August 2020.



The COVID-19 Solidarity Response Fund for WHO raised more than US\$224 million to support the response. The Global Research Forum brought together manufacturers, regulators, academics, national governments, civil society and international organizations to agree on a global roadmap to accelerate priority research and development. The Access to COVID-19 Tools (ACT) Accelerator has been launched to ensure priority research is funded, and that new therapeutics, diagnostics and vaccines are available on the basis of need.

By working with expert networks and collaborating centers around the world, in a matter of months WHO has published 130 guidance documents on various aspects of preparedness and response in different contexts, constantly updated as our knowledge of the virus and how best to beat it evolves. Through online and in-person training, technical missions and remote support, WHO regional offices have helped countries to translate guidance and strategies into national plans; more than 80% of countries now have such a plan, while WHO’s global and regional platforms, country offices, and collaborative initiatives such as the Global Outbreak Alert and Response network have helped to implement these plans on the ground.

Table 1 Confirmed cases and deaths by WHO region (as at 28 June 2020)

WHO region	Reported cases	Reported deaths
Africa	278 815	5785
Americas	4 933 972	241 931
Eastern Mediterranean	1 024 222	23 449
Europe	2 656 437	196 541
South-East Asia	735 854	20 621
Western Pacific	213 032	7420
Other*	741	13
Global	9 843 073	495 760

*Cases and deaths reported from international conveyances.

Conclusion

Throughout history, many epidemics and disease outbreaks have left a devastating impact on economies and

societies, led to increased migration, and negatively affected many more aspects of life. WHO, as the central body in global health matters, has taken the monumental responsibility to manage outbreaks of epidemics and other health crisis emergencies through short- and long-term resilience strengthening responses. The most important short-term responses that WHO and other actors focus on are the communicable disease control, effective risk communication, the protection of health-care workers, and the provision of vaccines. These solutions provide the necessary immediate response despite frequent challenges related to resource allocation. Regarding long-term responses, community-led sanitation, predictive modeling, training, and education are examples of actions taken towards strengthening resilience of both affected communities and health-care workers against outbreaks and epidemics. In this context, the main underlying challenges are poorly functional health systems and a lack of awareness. The global impact of COVID-19 is an indication of the necessity to further improve global resilience toward epidemics and disease outbreaks.

Further Research

When preparing for the conference and researching the topic of strengthening resilience against outbreaks and epidemics, delegates should consider the following questions: What is the involvement and role of other UN bodies regarding epidemics resilience and is there a potential for WHO to cooperate with them? What other long- and short-term resilience strengthening solutions can be used to prevent and/or effectively react to epidemics and disease outbreaks situations? What effective resilience methods and solutions can be learned from epidemics outbreaks? What are the current and ongoing disease outbreaks and what is the WHO's role in eliminating them?

Annotated Bibliography

Kieny, M.-P. et al. (2014). Health-system resilience: reflections on the Ebola crisis in western Africa. *Bulletin of the World Health Organization*, 92 (12): 850. Retrieved 18 September 2018 from: <http://doi.org/10.2471/BLT.14.149278>

This article was published in 2014 in the WHO Bulletin. It reflects on a research conducted by multiple authors on various aspects of Ebola crises in Western Africa, such as capacity of health systems or infrastructure. It also contains suggestions how to handle the crisis in the future. The article highlights the importance of having functional health systems as one of the main resilience building tactics. The article can serve as an inspiration for delegates' additional research regarding the particular epidemics as well as other factors that play role in strengthening resilience of health systems.

United Nations, General Assembly, Twenty-first session. (1966). *International Covenant on Economic, Social and Cultural Rights (A/RES/2200 (XXI))*. Adopted on the report of the Third Committee. Retrieved 20 July 2018 from: [http://undocs.org/A/RES/2200\(XXI\)](http://undocs.org/A/RES/2200(XXI))

The ICESCR, adopted in 1966, is a multilateral treaty that instructs and devotes its parties to work toward providing economic, social, and cultural rights to individuals. It is divided into five parts and 31 articles, each of them focusing on a different topic or implementation of the Covenant. For example, Article 12 is centered around the right to health. The document has been ratified by 168 states and is monitored by the UN Committee on Economic, Social and Cultural Rights (CESCR). The document provides delegates with a detailed insight into the legal aspects of the social, economic, and cultural rights globally.

United Nations, General Assembly, Sixty-ninth session. (2014). *Measures to contain and combat the recent Ebola outbreak in West Africa Resolution (A/RES/69/1)* [Resolution]. Adopted without reference to a Main Committee (A/69/L.2). Retrieved 6 July 2018 from <http://undocs.org/A/RES/69/1>

The General Assembly resolution 69/1 from 2014 calls for actions to be taken to control and combat the Ebola outbreak in West Africa. This resolution was the necessary starting point to have Ebola outbreak recognized as an emergency on the international level. The resolution suggested three steps of action to be taken at the time it was released: the establishment of UNMEER, followed by the suggestion for the Secretary-General to take necessary actions, and, lastly, an invitation to the Member States and UN bodies to react toward the crisis. This document provides delegates with information on logical reasoning and responses regarding the Ebola outbreak, and serves as a source of better understanding of the WHO position on the crises at their early stages.

United Nations, Security Council, 6547th Meeting. (2011). *Maintenance of international peace and security (S/RES/1983 (2011))* [Resolution]. Retrieved 6 July 2018 from [http://undocs.org/S/RES/1983\(2011\)](http://undocs.org/S/RES/1983(2011))

In 2011, the UN Security Council adopted resolution 1983 on the topic "Maintenance of international peace and security," which recognizes and emphasizes the global epidemic status of HIV and AIDS. It classifies the scale of this health crisis as a barrier to international development and growth, and calls for action by the Secretary-General to consider HIV-related needs of all people to be taken into account in activities and decision by the UN. Overall, this resolution provides the UN standpoint on the HIV/AIDS

issue on the international scale and can be used by delegates as a source for further investigation.

United Nations, Security Council, 7268th meeting (2014). *Peace and security in Africa (S/RES/2177 (2014))* [Resolution]. Retrieved 5 July 2018 from [https://undocs.org/S/RES/2177\(2014\)](https://undocs.org/S/RES/2177(2014))

Resolution 2177 on “Peace and security in Africa,” adopted by the Security Council in 2014, recognizes the scale of and expresses the concern over the Ebola outbreak in West Africa. It also considers it as a threat to international health and safety. Accordingly, the resolution calls for action of the involved governments to develop country-wide mechanisms to manage the situation, as well as it appeals to the Member States to set up international travel limitations that would limit the spread of the disease and to provide support to the states suffering from the outbreak. In summary, this resolution provides delegates with a detailed overview of recommendations how the international community attempted to keep the Ebola emergency under control and prevent its further spread.

World Health Organization. (2005). *Communicable disease control in emergencies: A Field Manual*. Retrieved 14 August 2018 from:

http://apps.who.int/iris/bitstream/handle/10665/96340/9241546166_eng.pdf?sequence=1

This field manual is a technical guide designed to help health professionals and public health coordinators that are deployed in emergency situations to prevent, discover, and control diseases affecting large populations. The guide is divided into five main sections, where each represents one of the main principles guiding the response in disease outbreaks and epidemics situations. Those principles are rapid assessment, prevention, surveillance, outbreak control, and disease management. The main purpose of this guide is to provide effective and efficient measures to tackle global health emergencies. The document can therefore provide a good starting point for delegates’ further research regarding specific aspects of disease prevention. In addition, it shows delegates how theory can and should guide the actual steps taken by health professionals in response to outbreaks.

World Health Organization. (2005). *International Health Regulations* [Report]. Retrieved 8 July 2018 from: <http://apps.who.int/iris/bitstream/handle/10665/246107/9789241580496-eng.pdf?sequence=1>

The IHR are a legally binding framework developed by WHO with the primary purpose of assisting states on collaboration regarding protecting human health, life, and well-being, including during epidemics and disease outbreaks situations. The IHR are not designed to focus on a specific disease or health issue but are rather applicable to ever-changing health risks. The framework also serves as a legal background for the development of other health-related documents with regards to travel, transportation, sanitary rules, etc. The IHR provide delegates with an insight into how the international health system is being regulated on a large scale, and include a detailed description of various legal requirements that Member States need to follow.

World Health Organization. (2015). *Anticipating Emerging Infectious Disease Epidemics* [Meeting Report].

Retrieved 14 August 2018 from: http://www.who.int/csr/disease/anticipating_epidemics/meeting-report-2015/en/

This meeting report of the WHO informal consultation was publicized in December 2015 and serves as a first step toward predicting and being better prepared to respond to epidemics worldwide. The report provides a summary of what multidisciplinary experts suggest as mechanisms for better preparation for future epidemics. Overall, the report focuses on various aspects: lessons that can be learned from the past, discussion on the potential future epidemics, science and technology as opportunities, prevention of the spread of diseases, and others. The report is a valuable source for delegates on gaining information and insight into better understanding what factors influence the development of resilience strategies for epidemics and outbreaks.

World Health Organization, World Health Assembly. (1998). *Emerging and other communicable diseases: antimicrobial resistance (WHA51.17)* [Resolution]. Retrieved 4 July 2018 from: <http://apps.who.int/medicinedocs/documents/s16334e/s16334e.pdf>

This WHA resolution recognizes the fast emergence of diseases and pathogens, and, accordingly, urges Members States to take the following steps of action: Firstly, to develop systems of antimicrobial resistant pathogen detection. Secondly, to develop educational programs informing the public and health workers on the use of antimicrobial agents. And lastly, to develop methods to protect health workers and others exposed to a disease. The resolution is divided into two parts, one calling upon the Member States to take action and the other requesting the Director-General to support states in their efforts to control outbreaks and epidemics. This resolution will help delegates understand the position WHO holds toward communicable disease management.

World Health Organization, World Health Assembly. (2001). *Global health security: epidemic alert and response (WHA54.14)* [Resolution]. Retrieved 4 July 2018 from: <http://apps.who.int/medicinedocs/documents/s16356e/s16356e.pdf>

This WHA resolution expresses the concern regarding global health security and recognizes the global importance on communicable disease prevention and control. The resolution is divided into three parts: In the first section, the WHA expresses its support for the development in the field of global health security. In the second section, the WHA asks Member States to participate in global health risk prevention activities. In the last section, the WHA requests the Director-General to provide support to Member States regarding global health security. This document provides delegates with initial information regarding epidemics and global health security and epidemic response. It also provides general guidelines for Member States, WHO, and its Director-General to follow.

II. Viral Mitigation to Promote Global Public Health

Introduction

The prevention of many illnesses is directly related to the success of immunizations, which continue to prevent diseases such as measles, diphtheria, and hepatitis B, among many others. According to the World Health Organization (WHO), vaccines prevent 2 to 3 million deaths each year, which includes the 17.1 million children that have been saved from measles since 2000. There has also been a significant decrease in people becoming infected with measles, from 546,800 people at in 2000 to 114,900 in 2014. During the early 2000s there was a great increase in vaccine administrations, but in 2016 WHO reported in their Immunization Coverage Factsheet that the percent of persons vaccinated has stagnated at 86%; this is just shy of the 90% goal that would promote herd immunity.

Vaccinations and immunizations are progressive technology that can help promote public health and save millions of lives. WHO defines immunization as the process of making a person immune to an infectious disease such as polio, measles, mumps, rubella, and other diseases by using a vaccine, a substance that stimulates the production of antibodies, to stimulate a person's immune system to alleviate the possibility of becoming infected and spreading that disease. Widespread vaccination can also protect the health of unimmunized individuals through herd immunity, which helps prevent the spread of the disease by disrupting the chain of infection. Herd immunity is important because it protects people who cannot be immunized, including infants, geriatric adults, and those who are immune-deficient. In this sense, vaccination and immunization are not only individual protections but provide far-reaching societal benefits that protect especially vulnerable populations.

WHO's role in providing universal access to vaccines is facilitated by its coordination with other organizations to collect data and continue to improve immunizations. While there has been significant progress in vaccine distribution and overall immunization rates, several challenges remain. WHO strives to provide access to vaccines to all people, but cost, poor distribution networks, and unreliable access prevents equal access to vaccines globally. Even when vaccines are available and accessible, myths and safety concerns may prevent individuals from accepting the vaccines, thereby threatening herd immunity. Additionally, there are many serious communicable diseases for which a vaccine has not yet been developed, most notably HIV.

International and Regional Framework

The *Constitution of the World Health Organization* (1946) asserts that equal access to public health is a necessary human right. The constitution also empowers WHO to provide health services to populations in need, to provide technical support and expertise for the improvement of public health preventive care, and to advance and promote work for disease eradication. The Constitution is also important for fostering discussions during World Health Assembly (WHA) meetings, including on topics like vaccine-preventable disease eradication, human rights, and access to healthcare.

Article 25 of the *Universal Declaration of Human Rights* (UDHR) (1948) also acknowledges the universal right to health, and affirms that all persons have rights to fair and equal access to healthcare, which includes affordable and fair access to vaccines. The UDHR promotes equality to ensure there is no question of who has access to these rights and particularly highlights the needs of vulnerable and marginalized groups. The *International Covenant on Economic, Social and Cultural Rights* (ICESCR) (1966) also asserts that states have a duty to ensure adequate healthcare, which includes the "prevention, treatment and control of epidemic, endemic, occupational and other diseases." The need for children to be vaccinated is recognized under the *Convention on the Rights of the Child* (CRC) (1989). The CRC mentions "health" 21 times throughout the document and asserts that fair and equal access to healthcare, especially for children, is at the forefront of human rights, and that children should have access to "the highest attainable standard of health."

The Sustainable Development Goals (SDGs) as presented in *Transforming our world: the 2030 Agenda for Sustainable Development* (2015) are an important aspect of ensuring universal access to vaccines is achieved. Goal 3 of the SDGs is to “Ensure healthy lives and promote well-being for all at all ages.”³²⁴ Targets 3.b and 3.8 highlight a specific need to achieve universal health coverage for all, which includes universal access to essential medicines and vaccines. Goal 3 also notes the need for increased research and development into new and more effective vaccines, especially for diseases that primarily impact development countries.³²⁶



In 2012, WHA approved the *Global Vaccine Action Plan 2011-2020* (GVAP). The goal was to bring Member States, non-governmental organizations (NGOs), and WHO together to create a strategy during the Decade of Vaccines (DoV). GVAP realizes the potential of successful immunization and utilizes a multilateral approach in order to reach goals previously set by the Global Immunization and Vision Strategy (GIVS) (2006-2015), while also setting new goals in line with the Millennium Development Goals and now the SDGs. WHA also adopted resolution 69.25 of 28 May 2016 on “Addressing the Global Shortage of Medicines and Vaccines,” which addresses how states can distribute necessary vaccines. The resolution also highlights the building blocks of a successful healthful community in which there is a continuous supply of safe, effective, and affordable medicines, and best practices for vaccine delivery and access are shared widely.

There are also regional frameworks that guide action on vaccines. The *Addis Declaration on Immunization* (2016) sets 10 specific goals on increasing access and destruction of vaccines within the African region. The declaration calls on states to increase funding for immunization programs, improve data collection and reporting, and strengthen regional research and innovation infrastructure to support vaccine development. The declaration also notes the need to work on these goals collaboratively with regional entities, international organizations, and NGOs.

Role of the International System

The 140th session of WHO’s Executive Board was complemented by the 70th annual session of WHA, which covered agenda items pertaining specifically to GVAP. The Board discussed four agenda items related to vaccines: addressing shortages, the proper implementation of GVAP, ensuring access to vaccines during a pandemic influenza, and strengthening immunizations for GVAP. Agenda item 14 of the *Report by the GVAP Secretariat* identified ways to help achieve the goals of GVAP by 2020, such as eradicating vaccine-preventable diseases through equitable access to preventive healthcare. The report also supported recommendations made by the board during the 140th session, including further supporting public-private partnerships for necessary funding, as conducting annual reviews of GVAP to monitor progress.

The United Nations Children’s Fund (UNICEF) is a key provider of vaccines to children and has worked in many capacities with WHO on GVAP initiatives, World Immunization Week (2015), and reports. UNICEF published a brochure in 2012 called *Immunization Keeping Children Alive and Healthy* that provides a basic introduction to understanding the importance of vaccines over the last 30 years. UNICEF also does foundational work to ensure each child and mother is reached and focuses much of its work on expanding access for vulnerable populations, particularly for children in underserved areas. Additionally, UNICEF collaborated with WHO and the World Bank on *State of the World’s Vaccines and Immunizations* (2009). This report made a specific call to action for all Member States to “sustain and increase funding for immunization in order to build upon the progress made so far in meeting the global goals” for immunization. WHO and UNICEF have been working together to develop vaccine action plans including GIVS. The World Bank’s financing capabilities are also a key component in ensuring that vaccines are made economically accessible. In 2009, the World Bank was able to finance the Advance Market Commitment alongside several Member States, the Global Vaccine Alliance (GAVI), and the Bill and Melinda

Gates Foundation for a total of \$1.5 million, which provided the opportunity for more children to be vaccinated. They have continued with this initiative, and in 2016 they provided funding for 57 GAVI-eligible states for the pneumococcal vaccine. This funding supports GAVI's work in achieving its "Aspiration Indicators" by 2020.

The creation of new vaccines is a key area of work for the international system. The UN General Assembly adopted resolution 70/300 of 15 September 2016, which promotes new and advanced technology to accelerate vaccine research in order to create new and affordable vaccines. Furthermore, the resolution highlights and expresses support for the important partnership between WHO and international NGOs as a way of relieving the financial burden of healthcare on developing countries and promoting essential vaccines to eliminate vaccine-preventable diseases. WHO's Initiative for Vaccine Research (IVR) focuses on research and development activities, with a particular focus on eradicating illnesses with high disease and economic burden in low and lower middle-income countries. This includes current research for vaccines against diseases like HIV, Zika, dengue, and tuberculosis, among others. In addition to the development of new vaccines, IVR conducts research to understand how vaccines can be better utilized and supports developing states in building vaccine infrastructure. This work is supplemented by research conducted by governments and universities, such as the United States of America's National Institute of Allergy and Infectious Diseases (NIAID), which is currently conducting clinical trials for vaccines against Ebola and HIV.

NGOs provide a great amount of support to WHO as key distributors of vaccines throughout the international community, while also providing local and more personalized service to patients. The Bill and Melinda Gates Foundation works directly with WHO, UNICEF, and GAVI to promote the DoV campaign by investing in vaccines and operating under GVAP principles and best practices. The Foundation is able to support partnering organizations such as Hedge Funds vs. Malaria & Pneumonia to make direct connections with Member States and help start grassroots programs that train and educate local providers in the distribution of vaccines. Save the Children also works on vaccination campaigns and focuses on eradicating vaccine-preventable diseases like measles. Save the Children, along with GAVI and Member States, has immunized 440 million children.

Promoting Equal Access to Vaccines

Inequalities continue to persist in the delivery of vaccines, as noted in the *World Health Statistics 2016* report. In 2016, one in ten infants did not receive any vaccinations, which is the primary contributor to the 134,200 deaths that occur from measles annually. One primary contributor to this issue is a lack of properly trained personnel to administer vaccines. Without sufficient personnel, there may be significant delays in vaccine schedules; the timeliness of vaccine delivery diverged by up to 80% between developed and developing countries. Lack of access also stems from a lack of medical facilities and reliable refrigeration for live vaccines. Access can also vary within countries, as urban areas typically have better access to technology, personnel, and transportation than rural areas. WHO further notes access is substantially different for people, especially children, in rural environments; after studying 73 countries, WHO found that children living in urban environments have better health outcomes than those who live in rural communities, due in part to their greater access to vaccines.

Vulnerable and marginalized groups are the most impacted by public health inequality. In addition to lack of access for people in rural areas, children living through conflict and humanitarian emergencies may not be able to complete the full childhood vaccine series. One way to address inequality and improve access is to help build capacity at the local level. WHO developed a training program in 1991 that is continuing to evolve by offering resources such as training packages and access to experts with a focus on rural communities. There have also been important efforts to highlight inequality through social media such as the #vaccineswork campaign, which brings visibility to the need to vaccinate and the need for fair and equal access to vaccines. The campaign's goal is to further promote that immunizations not only protect those who have been vaccinated, but protect those who cannot be vaccinated such as those who are immune-deficient.

Vaccine Education

WHO also provides education to individuals regarding vaccines, including the need for vaccines, vaccine safety, immunization success rates, previously eradicated diseases, and possible side effects of vaccines. As infection rates for vaccine-preventable diseases drop, some believe that vaccines are no longer necessary. In other regions, such as Southeast Asia and Africa, lack of vaccination is often due to the belief that vaccines are not effective. This stems from the still-high death rates from vaccine-preventable diseases in these regions; because the ongoing infections are caused by the low vaccination rate, this creates a self-perpetuating cycle. In parts of East Asia, a scandal erupted in April 2015 due to a state using improperly stored and outdated vaccines, where the regulatory agency was underfunded and unable to meet its obligations. This scandal was detrimental to promotion of vaccines as it solidified parents' concerns about vaccines' safety. Not only did the government's slow reaction cause more children to be improperly vaccinated and cost \$90 million in wasted vaccines, but it also ultimately caused parents to be reluctant about vaccinating their children; vaccination rates for children in the most affected areas have dropped significantly since the incident.

While WHO and many other NGOs are working tirelessly to provide vaccine education, there are still many individuals and communities not getting vaccinated due to a lack of medically accurate information. WHO's Vaccine Safety Net (VSN) regularly addresses concerns and myths fueling vaccine hesitancy and provides accurate data. VSN began in 2003, and is a global network of websites that have only factual data and statistics regarding vaccines. WHO estimates that more than 173 million users access the VSN network every month. Good information practices are at the forefront of combating vaccine myths and the VSN network does this by reviewing approved sites every two years with 34 areas of formal criteria to ensure each site can be validated accordingly.

Development of New Vaccines

In addition to ensuring equal access to vaccines and providing vaccine education, it is important for the international community to support the development of additional vaccines. A significant number of global illnesses and deaths occur from communicable diseases that lack a vaccine, including HIV, tuberculosis, dengue, and malaria. WHO's IRV supports vaccine development by establishing standards and guidelines for research, identifying research priorities, and strengthening capacity. Because scientists and institutions conduct vaccine research across multiple countries, IRV's standards ensure consistency in research techniques and the validation of results, as well as maintaining ethical conduct among research teams, particularly when research involves human subjects. Additionally, IRV identifies gaps in vaccine research that are of particular relevance to low and lower-middle income countries and establishes research agendas to close those gaps, ensuring that research serves the populations

most in need. To ensure quality is maintained, IVR builds capacity and facilitates technology transfer to allow low and lower-middle income countries to produce their own vaccines. Collectively, the IVR activities support and promote ongoing vaccine research happening all over the world.

WHO places particular emphasis on the development of a vaccine for HIV to reduce deaths from AIDS. Despite successes in preventing new HIV infections and in treating those who are infected, AIDS remains the leading cause of death in Africa and is the fourth-highest cause of death worldwide. According to WHO, “a safe, effective and available vaccine is

ultimately required to complement and enhance the effectiveness of existing prevention strategies to control the HIV/AIDS pandemic.”

WHO has partnered with the Joint UN Programme on HIV/AIDS (UNAIDS) to form the WHO-UNAIDS HIV Vaccine Initiative (HVI), which is involved in a number of ongoing

research studies as well as laying groundwork to ensure a future HIV vaccine can be quickly and effectively implemented in developing countries. HVI’s research partners include Emory University, Wayne State University, and local institutions in Brazil, Thailand, and Kenya; collectively, the partners are currently conducting a study on those states’ capacity to deliver an HIV vaccine. HVI’s work is supplemented by that of other research institutions, such as NIAID’s current human trials of a potential new vaccine in South African adults. NIAID’s study began in 2016 and is testing the efficacy of a new version of an HIV vaccine that previously showed some protection against infection. The research is co-funded by NIAID, the Bill & Melinda Gates Foundation, and the South African Medical Research Council. The International AIDS Vaccine Initiative has estimated that the deployment of a successful vaccine could reduce annual infections by 78-85% by 2070. The work of WHO, UNAIDS, and the various research institutions on an HIV vaccine has the potential to save millions of lives.



Conclusion

Public health is essential to creating a sustainable future for next generations. Vaccines are a vital component of primary health care and have been proven to prevent at least 2 to 3 million deaths annually. WHO continues to work to reach more people with vaccines, with a special focus on states that hold a large percentage of the 19.3 million infants who have not been vaccinated. However the price and challenges with personnel, infrastructure, and education continue to prevent universal access to vaccines. Many Member States have the opportunity to work toward sharing best practices in improving and broadening the administration of vaccines, which requires investing in training personnel and utilizing grassroots programs and NGOs. It is also important that proper education be provided to restore confidence in vaccination. Additionally, the impact of vaccines on public health can be greatly expanded through the development of new vaccines, especially a vaccine for HIV. As a leading international agency for public health, WHO continues to be a leader on this issue.

Further Research

There are several questions delegates should consider while researching the topic. As Member States look to achieving the SDGs, how can technology help advance the distribution of vaccines? How can states continue to work to close the large gap in vaccine-preventable deaths between developing and developed countries? How can social media, such as the #vaccineswork campaign, help in promoting fair and equal access to vaccines and public health? What education is necessary to improve vaccine rates in areas where vaccines are widely accessible? How can WHO help target vulnerable populations to ensure vaccine administration in these populations? How can WHO ensure vaccine research is conducted ethnically and to the benefit of the most vulnerable?

Annotated Bibliography

Global Alliance for Vaccines and Immunizations. (2016). *2016-2020 Strategy Indicator Definitions*. Retrieved 18 July 2017 from: <http://www.gavi.org/library/gavi-documents/strategy/gavi-2016-2020-strategy-indicator-definitions/>

The GAVI alliance strategy indicator focuses on several facets of vaccination success, including under-five mortality rate, number of future deaths averted, number of future disability-adjusted life years averted, number of unique children immunized with GAVI support, and vaccines sustained after transition. There are also several goal indicators with sub-indicators that consider sustainability, health systems, vaccines, and market-shaping. This document will be very helpful to delegates in understanding the different strategies are needed in order to make sure everyone has fair and equal access to vaccines.

World Bank et al. (2009). *State of the World's Vaccines and Immunizations, Third Edition*. Retrieved 22 August 2017 from: http://apps.who.int/iris/bitstream/10665/44169/1/9789241563864_eng.pdf

This report provides insight into the international community's state of vaccines and immunizations looking toward the conclusion of the Millennium Development Goals. This report showed overall that there was a lot of work left to be done with many of these concerns, such as access to vaccines still being prevalent. While the statistics are outdated, they will give delegates an opportunity to compare them to current rates and mark trends, successes, and remaining challenges. This report also highlights the different roles that are important to these bodies both individually and as a unit. Delegates can use this guide to understand the role of different entities on this topic, as well as the importance of funding for public health, protecting vulnerable and marginalized groups, and creating a system that is sustainable for future generations.

World Health Organization. (2013). *The World Health Report 2013*. Retrieved 19 July 2017 from: http://apps.who.int/iris/bitstream/10665/85761/2/9789240690837_eng.pdf?ua=1

The World Health Report is generally published biannually; however, this 2013 edition is the most recent WHO World Health Report. Each report focuses on a specific theme and the 2013 theme was "Research for universal health coverage," which encourages Member States to work on improving preventive health care. Vaccines are mentioned throughout the report, with a specific focus on universal health coverage on page 131, which is important for fair and equal access to vaccines. Delegates should consider this report as a vital resource when working on position papers working to consider what strategies Member States can undertake to strengthen preventive health care measures.

World Health Organization. (2015). *World Health Statistics 2016: Monitoring the health for the SDGs*. Retrieved 19 July 2017 from: http://www.who.int/gho/publications/world_health_statistics/2016/en/

This is an annual report that focuses the health concerns of each the 194 Member States. While every state works to achieve the SDGs by 2030, this report is a primary resource for ensuring they are staying on track, as well as providing examples for ameliorating struggling healthcare systems. This report will be very helpful to delegates in understanding the specific needs of their own Member State in promote the use of vaccines as well as the priorities and concerns of their fellow Member States.

World Health Organization. (2017). *Global Immunization and Vision Strategy* [Website]. Retrieved 23 August 2017 from: <http://www.who.int/immunization/givs/en/>

GIVS was coordinated by WHO and UNICEF in 2006 as a framework for Member States to adopt in order help more people receive vaccines. GIVS continues to work to determine the needs of Member States by highlighting areas of concern and helping states adopt a tailored approach to increasing vaccines domestically. Delegates can use this website to see the different reports and documents developed by GIVS under the direction of WHO and UNICEF and to understand the needs of individual Member States to encourage sharing best practices.

World Health Organization. (2017). *Immunization Coverage* [Website]. Retrieved 18 July 2017 from: <http://www.who.int/mediacentre/factsheets/fs378/en/>

This is a factsheet for immunizations created by the World Health Organization to show the breakdowns of each disease and what must happen for it to be eradicated. It also gives an overview of statistics and the amount of deaths vaccines have prevented, as well as the rate of the most successful immunizations. Delegates can use this source to very easily get an overview of the different vaccines that the background guide will cover, and to further understand this complex, multi-layered topic by looking at vaccination statistics, success of different vaccines, and pervasive challenges that prevent vaccines from being distributed.

World Health Organization. (2017). *Six common misconceptions about immunization* [Website]. Retrieved 18 July 2017 from: http://www.who.int/vaccine_safety/initiative/detection/immunization_misconceptions/en/index1.html

This in-depth article highlights some reasons why individuals and communities are opting out of vaccinations. This document discusses the root causes of these misconceptions and how to combat them directly with facts. Delegates can use this website to understand why some diseases have resurfaced, how to answer difficult questions regarding myths, and how to promote fair and equal access to vaccines between and within all Member States.

World Health Organization. (2017). *Vaccine Safety Net* [Website]. Retrieved 4 September 2017 from: http://www.who.int/vaccine_safety/initiative/communication/network/vaccine_safety_websites/en/

This website discussed by WHO is key to finding necessary resources that promote factual vaccine information. Monitored by WHO, the website can help people verify websites and information throughout the international community and provide reports on vaccine information in individual Member States. Delegates can use this website to help validate vaccine information that is specific to their individual Member States and cross-check sources as a starting point for education and awareness initiatives.

World Health Organization. (2017). *WHO-UNAIDS HIV Vaccine Initiative: Mission and activities* [Website]. Retrieved 10 November 2017 from:

http://www.who.int/immunization/research/forums_and_initiatives/HIV_vaccine_initiative/en/

This site describes the joint efforts of WHO and UNAIDS to develop an HIV vaccine. HIV/AIDS remains one of the most serious threats to public health, so delegates should be aware of the impact of HIV vaccine research. In particular, delegates can use this resource to understand how WHO works with UN agencies, research institutions, and state governments to conduct and facilitate vaccine development.

World Health Organization, World Health Assembly. (2012). *Global Vaccine Action Plan 2011-2020*. Retrieved 21 August 2017 from: http://www.who.int/immunization/global_vaccine_action_plan/GVAP_doc_2011_2020/en/

Following the DoV, GVAP came into force working to bring together all extensions and partners of WHO to create a comprehensive approach to having vaccines accessible to all by 2020. This report has many graphs and statistics that are helpful in understanding the complexity of this topic as well as the important role of the international system in providing access to public healthcare. Delegates can use this report as a baseline to understanding WHO's efforts in providing universal access to vaccines and the framework that shapes its current approach.