NMUN•NY

WORLD HEALTH ORGANIZATION
BACKGROUND GUIDE 2018

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NATIONAL MODEL UNITED NATIONS

Dear Delegates,

Welcome to the 2018 National Model United Nations New York Conference (NMUN•NY)! We are pleased to welcome you to the World Health Organization (WHO). This year's staff are: Mihai Gheorghe Cioc (Conference A) and Andrea Jacoby (Conference B). Mihai is completing his LL.B. at the University of Montréal Faculty of Law. This will be his second year on staff. Andrea has a BA in political science from Wright State University and works at a biodynamic vineyard and winery in Applegate, Oregon. This is her fourth year on staff

The topics under discussion for the World Health Organization are:

1. Mitigating the Health Impacts of Pollution
2. Improving Response and Coordination in Addressing Mental Health
3. Vaccination to Promote Global Public Health

The World Health Organization is an autonomous organization that directs and coordinates international healthcare issues within the United Nations (UN) system with the aim of attaining the highest possible level of health by all people. At NMUN 2018, we are simulating the Executive Board of WHO as regards to its size and composition. However, the body may address all topics within the mandate of WHO. Delegates should work to promote multilateral negotiations, which are inclusive and consider health as a human right for all under the Universal Declaration of Human Rights. Proper simulation is key in WHO in order to successfully complete the agenda and create resolutions that are succinct and effective.

This Background Guide serves as an introduction to the topics for this committee. However, it is not intended to replace individual research. We encourage you to explore your Member State's policies in depth and use the Annotated Bibliography and Bibliography to further your knowledge on these topics. In preparation for the Conference, each delegation will submit a Position Paper by 11:59 p.m. (Eastern) on 1 March 2018 in accordance with the guidelines in the *NMUN Position Paper Guide*.

Two resources, to download from the NMUN website, that serve as essential instruments in preparing for the Conference and as a reference during committee sessions are the:

1. *NMUN Delegate Preparation Guide* - explains each step in the delegate process, from pre-Conference research to the committee debate and resolution drafting processes. Please take note of the information on plagiarism, and the prohibition on pre-written working papers and resolutions. Delegates should not start discussion on the topics with other members of their committee until the first committee session.
2. *NMUN Rules of Procedure* - include the long and short form of the rules, as well as an explanatory narrative and example script of the flow of procedure.

In addition, please review the mandatory NMUN Conduct Expectations on the NMUN website. They include the Conference dress code and other expectations of all attendees. We want to emphasize that any instances of sexual harassment or discrimination based on race, gender, sexual orientation, national origin, religion, age, or disability will not be tolerated.

If you have any questions concerning your preparation for the committee or the Conference itself, please contact the Under-Secretaries-General for the Human Rights and Humanitarian Affairs Department, Dieyun Song (Conference A) and Dominika Ziemczonek (Conference B), at usg.hr_ha@nmun.org.

We wish you all the best in your preparations and look forward to seeing you at the Conference!

Conference A
Mihai Gheorghe Cioc, Director

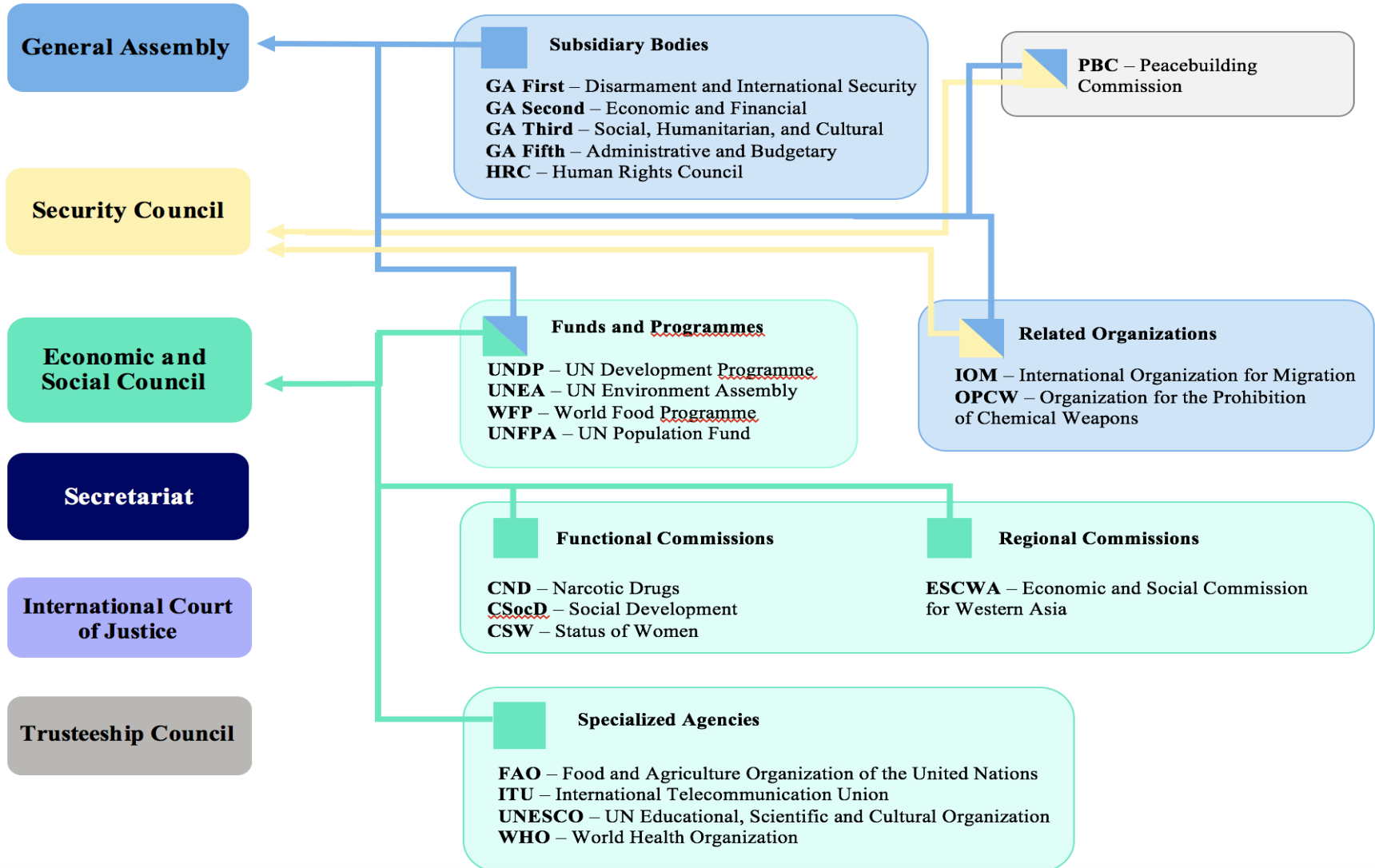**Conference B**
Andrea Jacoby, Director

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United Nations System at NMUN•NY

This diagram illustrates the UN system simulated at NMUN•NY and demonstrates the reportage and relationships 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.

General Assembly

Security Council

Economic and Social Council

Secretariat

International Court of Justice

Trusteeship Council

Subsidiary Bodies

GA First – Disarmament and International Security
GA Second – Economic and Financial
GA Third – Social, Humanitarian, and Cultural
GA Fifth – Administrative and Budgetary
HRC – Human Rights Council

PBC – Peacebuilding Commission

Funds and Programmes

UNDP – UN Development Programme
UNEA – UN Environment Assembly
WFP – World Food Programme
UNFPA – UN Population Fund

Related Organizations

IOM – International Organization for Migration
OPCW – Organization for the Prohibition of Chemical Weapons

Functional Commissions

CND – Narcotic Drugs
CSocD – Social Development
CSW – Status of Women

Regional Commissions

ESCWA – Economic and Social Commission for Western Asia

Specialized Agencies

FAO – Food and Agriculture Organization of the United Nations
ITU – International Telecommunication Union
UNESCO – UN Educational, Scientific and Cultural Organization
WHO – World Health Organization

Abbreviations

CLRTAP	*Convention on Long-Range Transboundary Air Pollution*
COP	Conference of Parties
CORDAID	Catholic Organization for Relief and Development Aid
CRC	*Convention on the Rights of the Child*
CRPD	*Convention on the Rights of Persons with Disabilities*
CSO	Civil Society Organization
DoV	Decade of Vaccines
ECOSOC	Economic and Social Council
GAVI	Global Vaccine Alliance
GHC	Global Health Cluster
GIVS	Global Immunization and Vision Strategy
GVAP	Global Vaccine Action Plan
HIV	HIV Vaccine Initiative
HSS	Health system strengthening
IASC	Inter-Agency Standing Committee
ICESCR	*International Covenant for Economic, Social and Cultural Rights*
ICT	Information and communication technology
IHR	*International Health Regulations*
IVR	Initiative for Vaccine Research
JMP	Joint Monitoring Programme for Water Supply and Sanitation
MER	Mental Health Evidence and Research
MHPSS	Mental health and psychosocial support
NCD	Non-communicable disease
NGO	Non-governmental organization
NIAID	National Institute of Allergy and Infectious Diseases
OHCHR	Office of the United Nations High Commissioner for Human Rights
PBAC	Programme, Budget and Administration Committee
PHC	Primary healthcare
PHE	Department of Public Health and Environment
SDG	Sustainable Development Goal
SLCP	Short-lived climate pollutant
UDHR	*Universal Declaration of Human Rights*
UHC	Universal health coverage
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
VSN	Vaccine Safety Net
WASH	Water, sanitation, and hygiene
WHA	World Health Assembly
WHO	World Health Organization
WHO-AIMS	World Health Organization Assessment Instrument for Mental Health Systems

Committee Overview

"I envision a world in which everyone can live healthy, productive lives, regardless of who they are or where they live. I believe the global commitment to sustainable development – enshrined in the Sustainable Development Goals – offers a unique opportunity to address the social, economic and political determinants of health and to improve the health and well-being of people everywhere." [1]

Introduction

The World Health Organization (WHO) is the directing and coordinating authority on international healthcare issues within the United Nations (UN) system, promoting the attainment of the highest possible level of health by all people.[2] WHO intervenes within six intersecting areas of work: the provision of assistance to its 194 Member States in the development of their respective health systems; the eradication of non-communicable diseases; the promotion of good lifelong health; the prevention, treatment, and care for 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.[3] 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.[4]

> The **World Health Organization** (WHO) is a specialized agency of the United Nations, reporting to the Economic and Social Council (ECOSOC).

> At NMUN•NY 2018, 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 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.

Outlined in the *Constitution of the World Health Organization* (1946), the principle was adopted in July 1946 by the then 51 UN Member States and 10 additional states.[5] After a complete breakdown of international health cooperation during the Second World War, an Interim Commission continued the activities of existing institutions until 26 Member States ratified WHO's constitution.[6] After the constitution entered 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.[7] Although WHO had largely remained a stimulator for health research throughout its first decade, its operative programs gradually expanded in the following years.[8] The adoption of WHA resolution 19.16 of 13 May 1966 on a "Smallpox Eradication Programme" marked the organization's first global immunization campaign and eventually succeeded in eliminating the disease in 1980.[9] 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.[10] The *Declaration of Alma-Ata* (1978) served as the basis for WHO's *Global Strategy for Health for All by the Year 2000* (1981), aiming to achieve universal primary healthcare.[11]

Governance, Structure, and Membership

While WHO's secretariat is located in Geneva, Switzerland, the organization maintains a worldwide presence, staffing six regional offices across the globe and operating a total of 149 country offices and decentralized

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[1] WHO, *Vision statement by WHO Director-General*, 2017.
[2] WHO, *About WHO*, 2017; WHO, *Basic Documents – 48th ed. Including amendments adopted up to 31 December 2014*, 2014.
[3] WHO, *What we do*, 2017.
[4] WHO, *Constitution of WHO: principles*, 2017.
[5] WHO, *Origin and development of health cooperation*, 2017.
[6] Ibid.
[7] Ibid.
[8] Ibid.
[9] WHO, *The Third Ten Years of the World Health Organization – 1968-1977*, 2008, pp. 177-181.
[10] Ibid, pp. 303-304.
[11] WHO, *Global Strategy for Health for All by the Year 2000*, 1981; International Conference on Primary Health Care, *Declaration of Alma-Ata*, 1978.

sub-offices.[12] 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 Member State of WHO that is elected by WHA with respect to population per region proportions.[13] The Board's key functions include the drafting of multiannual programs of work as well as submitting draft resolutions to WHA for consideration.[14] The 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, as well as the organization's financial and administrative management.[15] The PBAC consists of 14 board members, with two members from each region elected by the Board for a two-year period.[16] Furthermore, the Board endorses decisions and policies of WHA and coordinates response efforts to international health emergencies.[17] The Board meets at least twice per year, and also holds special sessions in the event of an international health emergency, such as in response to the Ebola outbreak in West Africa.[18]

In addition to its primary function of determining WHO's policies, WHA also supervises the organization's financial policies, adopts its budget, and appoints the Director-General on the nomination of the Executive Board.[19] WHO's Director-General acts as chief technical and administrative officer with the support of the secretariat's administrative staff.[20] The Director-General also serves as the ex officio secretary of WHA and the Executive Board, as well as of the organization's commissions and committees, and is responsible for submitting WHO's financial statements and budget estimates to the Executive Board.[21] Dr. Tedros Adhanom Ghebreyesus is the current Director-General of WHO.[22] The Director-General's vision reinforces the importance of the Sustainable Development Goals (SDGs) in improving global health and well-being by focusing on health rights for all people and by giving health a central role in international agendas.[23]

WHO's biennial program budgets derive from its multiannual programs of work, and are funded via a mix of assessed and voluntary contributions.[24] Assessed contributions consist of membership dues paid by WHO's Member States, calculated proportionately to their wealth and population.[25] Voluntary contributions are provided by WHO Member States in addition to their assessed contributions, as well as by other partners such as non-governmental organizations (NGOs), academic institutions, and private corporations.[26] These contributions can either be earmarked for a specific WHO program or represent a core voluntary contribution, which can be assigned to any item in WHO's biennial program budget.[27] WHO has steadily received assessed contributions in the past; however, growth in voluntary contributions has led to a gradual decline of assessed contributions.[28] The financing dialogue of 2016 discussed raising assessed contributions from stagnation, in addition to examining underfunded areas and reporting on the financial coverage of health emergencies.[29] In line with financial reform, the *Proposed Programme Budget 2018-2019* replaces preapproved funding for crisis response with planning and budgeting at the time of emergency, invests in coordination efforts to align different management levels with the SDGs, and adjusts resource allocation for areas that attract less donor interest.[30]

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[12] WHO, *WHO Presence in Countries, Territories and Areas. 2015 Report*, 2015.
[13] WHO, *The Executive Board*, 2017.
[14] WHO, *Governance*, 2017; WHO, *Constitution of the World Health Organization*, 1946, p. 9.
[15] WHO, *Revised terms of reference for the Programme, Budget and Administration Committee of the Executive Board (EB131.R2)*, 2012, p. 3.
[16] Ibid.
[17] WHO, *Constitution of the World Health Organization*, 1946, p. 9.
[18] WHO, *The Executive Board*, 2015; WHO, *Special Session on the Ebola Emergency (EBSS/3/2015/REC/1)*, 2015.
[19] WHO, *Constitution of the World Health Organization*, 1946, p. 6.
[20] Ibid., p. 9.
[21] Ibid., pp. 9-10.
[22] WHO, *Dr Tedros takes office as WHO Director-General*, 2017.
[23] WHO, *Vision statement by WHO Director-General*, 2017.
[24] WHO, *Planning, finance and accountability*, 2017; WHO, *Funding WHO*, 2017.
[25] WHO, *Assessed contributions*, 2017.
[26] WHO, *Proposed Programme Budget 2018-2019*, 2017; WHO, *Voluntary contributions*, 2017.
[27] Ibid.
[28] WHO, *Assessed contributions*, 2017.
[29] WHO, *WHO's financing dialogue 2016*, 2016.
[30] WHO, *Proposed Programme Budget 2018-2019*, 2017.

In May 2011, the Executive Board launched a Member State-led reform to transform the organization into a more "effective and efficient, transparent and accountable" body to maintain its position as a key contributor in the 21st century.[31] The reform addresses three core areas: program and priority setting; governance and management; and tackling issues relating to accountability, human resources, evaluation, and communication.[32] 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.[33] After six years of reform, WHO has consolidated its position in influencing the global health agenda, improving prioritization based on country needs, and strengthening oversight and accountability.[34]

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* (1946).[35] Notwithstanding its status as an autonomous organization, WHO operates within the purview of the Economic and Social Council (ECOSOC).[36] Accordingly, WHA reports to ECOSOC concerning any agreement between the organization and the UN.[37] Furthermore, WHO's Director-General is the official representative of international health efforts across a broader range of policy areas.[38] As such, the Director-General is a key member of the UN System Chief Executives Board for Coordination, which comprises the 31 executive heads of the UN's specialized agencies, related organizations, and funds and programs.[39]

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.[40] The mandate defines WHO's role in advancing the eradication of diseases; coordinating and directing international health programs and projects; and improving nutrition, sanitation, housing, recreation, and other conditions.[41] In order to achieve these tasks, WHO partners with other UN bodies and specialized agencies, Member States' health administrations, and NGOs.[42] Finally, WHO is responsible for advancing medical and health-related research; promoting scientific collaboration; improving standards of training in health, medical, and related professions; and developing international standards for food, biological, pharmaceutical, and similar products.[43]

WHO carries out various projects, campaigns, and partnerships, addressing a wide range of health topics.[44] As illustrated by WHO's response to the 2014 Ebola outbreak in West Africa, WHO programs may operate on global, regional, and country levels simultaneously.[45] In July 2015, WHO had approximately 1,100 technical experts and medical staff deployed in the three most affected states: Guinea, Liberia, and Sierra Leone.[46] WHO's activities in these states were 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.[47] WHO's Executive Board adopted resolution EBSS3.R1 titled "Ebola: ending the current outbreak, strengthening global preparedness and ensuring WHO's capacity to prepare for and respond to future large-scale outbreaks and emergencies with health consequences" of 25 January 2015,

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[31] WHO, *WHO reform: overview of reform implementation*, 2015.
[32] Ibid.; WHO, *Why reform?*, 2016.
[33] WHO, *WHO reform: overview of reform implementation*, 2015.
[34] WHO, *Leadership and management at WHO: evaluation of WHO reform, third stage*, 2017.
[35] *Charter of the United Nations*, 1945; WHO, *Constitution of the World Health Organization*, 1946, p. 2.
[36] UN DPI, *The United Nations System*, 2015.
[37] WHO, *Constitution of the World Health Organization*, 1946, p. 7.
[38] UNSCEB, *Who we are*, 2016.
[39] Ibid.
[40] WHO, *Constitution of the World Health Organization*, 1946, pp. 2-3.
[41] Ibid, p. 2.
[42] Ibid.
[43] Ibid, p. 3.
[44] WHO, *Health topics*, 2017.
[45] WHO, *Ebola Response in Action*, 2015; WHO, *Partners: Global Outbreak Alert and Response Network (GOARN)*, 2017.
[46] Ibid.
[47] Ibid.

outlining the coordinating framework for stakeholders involved in the response.[48] The resolution set assistance priorities to affected countries' health systems, and called upon Member States and WHO's Director-General to strengthen disease surveillance capacities and data flows between stakeholders.[49] 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.[50] In the Syrian Arab Republic, currently categorized as a Grade 3 emergency, WHO has assisted war victims by providing vaccinations to children in partnership with UNICEF; training health workers in topics including mental health, nutrition, and immunization; and negotiating evacuation for wounded and critically ill patients.[51]

WHO also assumes a norm- and standard-setting function to help states address public health issues, most notably via promoting the implementation of the *International Health Regulations* (IHR) (2005).[52] The IHR was adopted by WHA resolution 58.3 on "Revision of the International Health Regulations."[53] The resolution called for a legal framework strengthening states' disease surveillance capacities, an issue that became salient following a resurgence of several epidemic diseases in the 1990s, such as cholera outbreaks in South America and plague in India.[54] The IHR came into force on 17 June 2007 and legally binds 196 states, including all WHO Member States, setting standards for the prevention of and response to acute, cross-border public health risks.[55] However, IHR lacks an enforcement mechanism, and incentives for compliance are based solely on peer pressure and public knowledge.[56]

The promotion of health-related research plays a central role in advancing global health and provides benefits across WHO's work areas.[57] 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.[58] Another key contribution by WHO is the provision of data across a variety of health issues.[59] This is conducted via the organization's Global Health Observatory Data Repository, established in 2005 to complement WHO's annual *World Health Statistics Reports*.[60] The continuous, systematic collection, analysis, and interpretation of health-related data allow the organization, its Member States, and external stakeholders to conduct quality public health surveillance.[61]

WHO partners with other UN bodies, such as the Joint UN Programme on HIV/AIDS, as well as external public entities, NGOs, and private sector actors.[62] Most notably, WHO leads the Global Health Cluster (GHC), which comprises 48 partners, including UN bodies such as UNICEF, as well as public stakeholders and academic institutions.[63] Aiming to minimize the health impact of humanitarian emergencies, GHC partners collaborate to foster global capacities for emergency preparedness, response, and recovery from humanitarian health crises.[64] 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.[65]

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[48] WHO, *Special Session on the Ebola Emergency (EBSS/3/2015/REC/1)*, 2015, pp. 3-7.
[49] Ibid.
[50] WHO, *Questions and answers about WHO's role in Humanitarian Health Action*, 2017.
[51] WHO, *10 things you should know about the Syrian crisis*, 2017.
[52] WHO, *International Health Regulations (IHR)*, 2017.
[53] WHO, *Frequently asked questions about the International Health Regulations (2005)*, 2017.
[54] Ibid.
[55] Ibid.; WHO, *International Health Regulations (IHR)*, 2017.
[56] WHO, *Frequently asked questions about the International Health Regulations (2005)*, 2017.
[57] WHO, *The WHO strategy on research for health*, 2012, p. 8.
[58] WHO, *Sixty-Third World Health Assembly. Resolutions and Decisions. Annexes (WHA63/2010/REC/1)*, 2010, p. 119; WHO, *The WHO strategy on research for health*, 2012, p. 8.
[59] WHO, *Global Health Observatory Data Repository*, 2015; WHO, *World Health Statistics 2005*, 2005, p. 5.
[60] Ibid.
[61] WHO, *Public Health Surveillance*, 2017.
[62] WHO, *Partnerships*, 2017.
[63] WHO, *About the Global Health Cluster*, 2015; WHO, *Global Health Cluster Partners*, 2015.
[64] WHO, *The strategic framework of the Global Health Cluster*, 2015.
[65] WHO, *Partnerships*, 2017.

Recent Sessions and Current Priorities

By adopting resolution 66.1 of 24 May 2013, WHA approved the organization's *Twelfth General Programme of Work 2014-2019*, which specifies WHO's current leadership priorities.[66] WHO's work focuses on promoting IHR's implementation, improving access to medical products, action on social determinants of health, advancing universal health coverage, addressing the challenge of non-communicable disease, and shaping WHO's role in achieving the SDGs.[67] WHO actively participated in the 2015 UN Climate Change Conference in Paris, France, which recognized the benefits that improved adaptation of climate action protocols would have on health.[68] WHO, in partnership with the Government of France, co-hosted the Second Global Conference on Health and Climate in July 2016 to portray how public health actors could aid in implementing the *Paris Agreement* (2015).[69]

During its seventieth session in May 2017, WHA adopted resolutions that reaffirm organizational commitment to the SDGs.[70] For example, resolution 70.14 called for strengthening immunization, resolution 70.15 highlighted improving health of refugees and immigrants, and resolution 70.12 focused on cancer prevention, all of which demonstrated attention to particularly vulnerable groups, preventive measures, and ensuring good health of all people, as highlighted in the SDGs.[71] To celebrate the goal of the *2030 Agenda for Sustainable Development* (2015) to "leave no one behind," the 70th WHA featured many side events that targeted vulnerable stakeholders.[72] Most notably, a technical briefing showcased successful stories of environmental health risk management; youth representatives participated in a citizens' dialogue on sexual and reproductive health and rights; and Every Woman Every Child hosted a discussion on innovation for women's, children's, and adolescents' health.[73] The 140th Executive Board meeting in January 2017 included discussions on WHO's preparedness in health emergencies, evaluation of health systems, communicable diseases, and non-communicable diseases.[74] A report by the Secretariat submitted to the Board explained the role of health at the center of sustainable development and described how WHO could support Member States in implementing the SDGs.[75]

Recently, WHO has been actively addressing mosquito-related viral outbreaks, including the Zika virus outbreak and associated complications, by setting out a Strategic Response Plan to support local governments in managing the outbreak.[76] In addressing the consequences of climate change, the WHO Contingency Fund for Emergencies responded to El Niño in Papua New Guinea by providing financial support in May 2016.[77] As cholera continued spreading in Yemen, WHO, UNICEF, and other partners provided infrastructural and financial support to local health workers to treat patients.[78]

Conclusion

WHO is the coordinating authority on international healthcare issues within the UN system.[79] As the body responsible for the formulation of WHO's policies, WHA assumes a key responsibility in addressing current health priorities.[80] The global state of health is ever-changing and increasingly complicated, requiring strategic, creative,

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[66] WHO, *Twelfth General Programme of Work 2014-2019 (WHA66.1)*, 2013.
[67] WHO, *Leadership priorities*, 2015.
[68] WHO, *WHO key messages for COP 21*, 2015; WHO, *Health events in the 2015 UN climate change conference of parties (COP 21)*, 2015.
[69] WHO, *Second Global Conference on Health and Climate Change*, 2016.
[70] WHO, *Agenda (A70/1 Rev.2)*, 2017.
[71] WHO, *Cancer prevention and control in the context of an integrated approach (WHA70.12)*, 2017; WHO, *Strengthening immunization to achieve the goals of the global vaccine action plan (WHA70.14)*, 2017; WHO, *Promoting the health of refugees and migrants (WHA70.15)*, 2017.
[72] WHO, *70th World Health Assembly. Selected highlights & outcomes of WHA70*, 2017.
[73] Ibid.
[74] WHO, *Agenda (EB140/1 Rev.1)*, 2017.
[75] WHO, *Progress in the implementation of the 2030 Agenda for Sustainable Development (EB140/32)*, 2017.
[76] WHO, *WHO in emergencies*, 2017; WHO, *Zika virus outbreak global response*, 2016.
[77] WHO, *Contingency Fund for Emergencies releases funds to support response to el Niño in Papua New Guinea*, 2016.
[78] WHO, *The life and death struggle against cholera in Yemen*, 2017.
[79] WHO, *About WHO*, 2017.
[80] WHO, *The Executive Board,* 2017; WHO, *World Health Assembly*, 2017.

and unique solutions that adapt to local conditions and situations.[81] 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.[82]

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World Health Organization. (2014). *Basic Documents – 48th ed. Including amendments adopted up to 31 December 2014*. Retrieved 25 August 2017 from: http://apps.who.int/gb/bd/PDF/bd48/basic-documents-48th-edition-en.pdf
> *This regularly updated 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 non-governmental organizations. 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 the formal mandate for the organization's operations.*

World Health Organization. (2017). *About WHO* [Website]. Retrieved 28 August 2017 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, and background information on its governing bodies and WHO's cooperation with other organizations. The website represents a key resource that allows delegates to obtain an overview of not only WHO's formal structures and history, but also its role in the UN system and its work with Member States. While information provided on the website is fairly general, its subsections contain helpful links to more specific sources of information on the topics outlined above.*

World Health Organization. (2017). *Global Health Observatory Data Repository* [Website]. Retrieved 28 August 2017 from http://www.who.int/gho/database/en/
> *This online database maintained by WHO provides access to an extensive collection of data across a wide range of health-related topics, countries, and time periods. The database also provides links to WHO reports on a number of health issues and its World Health Statistics publication. The database represents an excellent resource for delegates to learn more about statistical trends and current health priorities on global, regional, and country levels.*

World Health Organization. (2017). *Proposed Programme Budget 2018-2019.* Retrieved 28 August 2017 from http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_7-en.pdf
> *This WHO report provides a detailed overview of the different types of contributions to WHO's current and future biennial program budget and specifies the allocation of funds by health issues, WHO's categories of work and WHO regions. The report provides insight as to areas of increased or decreased funding, outlining the need for this change. The proposal represents an excellent resource for delegates to learn more about the volume of funds needed for individual WHO programs and projects and how WHO ranks priorities by changing allocation to each aspect of the organization.*

World Health Organization. (2017). *World Health Statistics 2017: Monitoring health for the SDGs*. Retrieved 27 September 2017 from: http://apps.who.int/iris/bitstream/10665/255336/1/9789241565486-eng.pdf?ua=1
> *Through the World Health Statistics series, WHO provides annual updates on health statistics for its Member States. The 2017 edition focuses on progress in health-related SDGs and associated targets based on data gathered by WHO's Member States. It also uses a new structure to report health statistics, reflecting WHO's dedication to achieving the SDGs, which are more ambitious than the previous Millennium Development Goals. Delegates will find the data indicative of the direction WHO considers going forward, of the changes that the organization has made to adapt*

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[81] WHO, *10 facts on the state of global health*, 2017; WHO, *World Health Statistics 2017: Monitoring health for the SDGs*, 2017.
[82] WHO, *WHO Director-General*, 2017.

to the changing global health situation, and of the upcoming challenges that will require collaborative resolutions.

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I. Mitigating the Health Impacts of Pollution

"A healthy environment underpins a healthy population. If countries do not take action to make environments where people live and work healthy, millions will continue to become ill and die too young."[83]

Introduction

Although pollution itself is not a new topic to the United Nations (UN), research on increasing levels of pollution has highlighted its contribution to climate change, as well as the harmful impact it has on human health.[84] Pollution, is the "introduction of harmful materials into the environment."[85] According to the World Health Organization (WHO), urban areas in particular are susceptible to higher levels of pollution due to the higher concentration of population, which will continue to increase as people move into them.[86] Ninety-eight percent of cities in developing countries with more than 100,000 people experience exposure to air pollution levels in excess of WHO safety limits, raising the risk of respiratory disease, lung cancer, and heart disease among the population.[87] WHO considers the mitigation of the health impacts of pollution key to maintaining a strong and healthy population.[88] In 2012, approximately 12.6 million people died due to unhealthy environmental conditions, largely as a result of non-communicable diseases caused by air, water, and soil pollution.[89] If pollution remains widely unregulated, it will continue to cause the early deaths of millions of people each year.[90]

Pollution is an issue that transcends national boundaries, due to its ability to impact all humans regardless of geographical location and socioeconomic background.[91] According to the World Bank, Member States spend between five and 14% of their national GDP on mitigating the health impacts of pollution, mostly through healthcare costs.[92] In more developed regions, such as North America, Europe, and parts of southeast Asia, of deaths due to environmental factors, approximately 80% are from non-communicable diseases caused largely by air pollution generated by transportation and energy production.[93] Air pollution particularly raises the risk for cardiovascular diseases such as heart disease and stroke, which is a contributing factor for 7.3 million deaths annually.[94] In developing parts of the world, deaths attributable to the environment are mostly due to infectious, parasitic, neonatal, and nutritional diseases.[95] This is largely due to improper waste treatment and disposal, which result from infrastructure deficiencies and generate large amounts of ground and water pollution.[96]

International and Regional Framework

In 1972, the UN Conference on the Human Environment resulted in the *Declaration of the UN Conference on the Human Environment*, which was one of the first international documents highlighting the importance of protecting the environment from damage.[97] The declaration stressed the need for collaboration in both information-gathering and action initiatives in order to preserve the environment and defend it from pollutants.[98] Additionally, the declaration emphasized that while Member States do have the sovereign right to use their own air, water, and land

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[83] WHO, *An estimated 12.6 million deaths each year are attributable to unhealthy environments*, 2016.
[84] Ibid.
[85] National Geographic Society, *Pollution*, 2017.
[86] WHO, *WHO Global Urban Ambient Air Pollution Database*, 2016.
[87] Ibid.
[88] WHO, *An estimated 12.6 million deaths each year are attributable to unhealthy environments*, 2016.
[89] Ibid.
[90] Ibid.
[91] Ibid.
[92] The World Bank, *Reducing Pollution*, 2017.
[93] WHO, *Preventing Disease Through Healthy Environments – A Global Assessment of the Burden of Disease from Environmental Risks*, 2016, p. 89.
[94] WHO, *An estimated 12.6 million deaths each year are attributable to unhealthy environments*, 2016.
[95] WHO, *Preventing Disease Through Healthy Environments – A Global Assessment of the Burden of Disease from Environmental Risks*, 2016, p. 89.
[96] Ibid., pp. 14-18.
[97] UN Conference on the Human Environment, *Report of the United Nations Conference on the Human Environment (A/CONF.48/14/Rev.1)*, 1972, p. 3.
[98] Ibid., p. 4.

resources, they also have an obligation to make sure that such usage does not negatively impact their neighbors.[99] The declaration helped inspire work on the 1979 *Convention on Long-range Transboundary Air Pollution* (CLRTAP), negotiated by the Economic Commission for Europe.[100] The CLRTAP was the first regional environmental convention aimed at reducing harmful air pollutants and identifying air pollution as a problem that transcends international boundaries and requires enhanced cooperation for mitigation.[101] This document also, for the first time, noted that air pollution endangers human health, harms ecosystems, and damages material property.[102]

On 25 September 2015, the UN General Assembly adopted resolution 70/1 on "Transforming our world: the 2030 Agenda for Sustainable Development," which provided 17 goals for ending poverty, protecting the planet, and ensuring prosperity for all; several goals are closely related to mitigating the impact of pollution on human health.[103] Sustainable Development Goal (SDG) 1 focuses on reducing poverty, which is considered by WHO to be a key reason many people are forced to be in contact with hazardous environmental conditions.[104] Reduction of preventable deaths, including those caused by pollution, is key to improving good health and well-being as tracked by SDG 3.[105] Targets regarding clean water and sanitation under SDG 6 are important to WHO because water pollution can limit access to clean water and sanitation, thereby increasing susceptibility to diseases such as diarrhea, cholera, and typhoid fever.[106] Other areas in which WHO is actively involved include SDG 12 on responsible consumption and production, SDG 13 on climate action, and SDG 17 on partnerships for the goals.[107] The work of WHO is critical to providing initiatives to accomplish the health-related targets laid out in the SDGs.[108]

The Conference of the Parties (COP) to the *UN Framework Convention on Climate Change* (1992) meets yearly to discuss key climate issues.[109] During the 2013 COP 19, delegates set a funding target of $100 billion annually by 2020, which would support developing countries in creating programs that are environmentally sensitive as well as mitigating the devastation caused by natural disasters.[110] This was later reinforced during the 2015 COP 21, where delegates negotiated and signed the *Paris Agreement*.[111] The *Paris Agreement* set targets for reducing greenhouse gas emissions, limiting the increase in average global temperature to two degrees Celsius above pre-industrial levels, and reallocating funds to help developing countries make the switch to renewable energy.[112]

Role of the International System

Within WHO, the Department of Public Health and Environment (PHE) is responsible for promoting a healthy environment by assessing and managing current risks and by providing policy guidance through reporting on climate and regional health trends.[113] At the 70th World Health Assembly (WHA), held 22-31 May 2017, PHE addressed the role of the health sector in the regulation of chemical agents responsible for pollution.[114] While there is significant work being done in relation to the improper disposal of chemical waste and the threat this poses to the environment, WHA took a step to involve the health sector by approving the "Strategic Approach to International Chemicals

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[99] Ibid., p. 5.
[100] UNECE, *1979 Convention on Long-Range Transboundary Air Pollution*, 1979, p. 1.
[101] UNECE, *UNECE's Convention on Long-range Transboundary Air Pollution celebrates 30th Anniversary*, 2009.
[102] UNECE, *1979 Convention on Long-Range Transboundary Air Pollution*, 1979, p. 2.
[103] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[104] Ibid.
[105] Ibid.
[106] WHO & UNICEF, *Safely managed drinking water*, 2017, p. 10.
[107] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[108] WHO, *Putting health at the heart of sustainable development at Rio+20*, 2012.
[109] UNCED, *United Nations Framework Convention on Climate Change*, 1992.
[110] COP 19, *Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013*, 2013, pp. 6-11.
[111] COP 21, *Paris Agreement*, 2015.
[112] Ibid.
[113] WHO, *Department of Public Health, Environmental and Social Determinants of Health*, 2017.
[114] WHO, *Public Health, Environmental and Social Determinants of Health (PHE) during the 70th World Health Assembly*, 2017.

Management."[115] The strategy aims to improve the handling and production of chemicals, develop better risk management plans, and enhance technical cooperation among Member States.[116]

WHA has adopted a number of resolutions on the importance of mitigating pollution to improve global health.[117] At its 68th meeting, WHA adopted resolution 68.8 on "Health and the environment: addressing the health impact of air pollution" (2015), which focuses on the importance of collaboration in mitigating air pollution.[118] While most initiatives focus on the cooperation of Member States, this document also notes the importance of encouraging work at the local level, including discouraging individual households from using inefficient heating methods that contribute to air pollution, such as burning wood.[119] This document reinforces that small local initiatives build up to have a national impact, which in turn can have a significant influence in improving the shared environment.[120] In the same meeting, WHA adopted resolution 68.18 on "Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property" (2015).[121] The plan promotes forward thinking on medical advances and provides a framework for sustainable and essential research and development in the health field.[122] This document additionally establishes an 18-member panel, with a variety of backgrounds, subject matter expertise, and technical expertise, in order to conduct the overall review of the program.[123]

WHO works closely with other UN organizations to advance key agenda items with a perspective on improving health outcomes.[124] In 1990, WHO and the UN Children's Fund (UNICEF) collaborated to form the Joint Monitoring Programme for Water Supply and Sanitation (JMP), which is the primary curator of global data on drinking water, sanitation, and hygiene (WASH).[125] Today, the JMP is an extensive database enhancing the way WASH data is aggregated and published and has been successful in identifying trends and areas for improvement with regards to WASH.[126] Many Member States do not have sufficient data on the quality of water and sanitation services, and the JMP assists by providing best practices for data collection and monitoring of WASH targets.[127]

The UN General Assembly has also considered many topics related to pollution and the environment.[128] In 1989, the General Assembly decided to convene the 1992 UN Conference on Environment and Development through resolution 44/228.[129] This resolution emphasized the global nature of environmental challenges and degradation, noting that these issues have a significant impact on human health.[130] Additionally, it highlighted the importance of conducting research and developing regionally tailored policies, as different areas of the world experience different environmental and socioeconomic problems.[131]

WHO also works closely with the UN Environment Programme (UNEP) by providing scientific studies on the impact of environmental factors on human health, including reports on how pollution impacts health and the environment.[132] During its 2014 meeting, the UN Environment Assembly (UNEA), the decision-making body of UNEP, established improving and facilitating information-sharing and promoting strengthened cooperation on

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[115] WHO, *The role of the health sector in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond (A70/36)*, 2017, pp. 6-10.

[116] Ibid., pp. 6-10.

[117] WHO, *World Health Assembly*, 2017.

[118] WHO, *Health and the environment: addressing the health impact of air pollution (WHA68.8)*, 2015, p. 6.

[119] Ibid., p. 3.

[120] Ibid.

[121] WHO, *Global strategy and plan of action on public health, innovation and intellectual property (WHA68.18)*, 2015, p. 2.

[122] Ibid., p. 1.

[123] Ibid., p. 2.

[124] UNICEF/WHO Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, *How we work*, 2017.

[125] Ibid.

[126] Ibid.

[127] Ibid.

[128] UN General Assembly, *United Nations Conference on Environment and Development (A/RES/44/228)*, 1989, p. 151.

[129] Ibid.

[130] Ibid.

[131] Ibid., p. 152.

[132] CCAC, *About*, 2017.

environmental issues as a priority.[133] The second meeting of UNEA in 2016 established a collective goal to integrate the SDGs into ongoing conservation efforts of biological diversity and protecting ecosystems from pollutants.[134] This meeting drove the development of the Health and Environment Linkages Initiative, which raises awareness of the overlapping of key issues between health and the environment in developing countries.[135] This meeting also created the Climate & Clean Air Coalition, which is a partnership between a variety of governments, intergovernmental organizations, businesses, and scientific organizations, including WHO and UNEP.[136]

Air Pollution

WHO has determined that one in nine deaths each year can be attributed to air pollution, which represents the greatest environmental risk to human health.[137]Air pollution is a transnational issue with the potential to affect people regardless of boundaries, socioeconomic status, or age.[138] Air pollution is defined as the "presence of contaminant or pollutant substances in the air that do not disperse properly and that interfere with human health or welfare, or produce other harmful environmental effects."[139] Air pollution is separated into two categories: household (indoor) and ambient (outdoor).[140] Ambient air pollution is caused by, but not limited to, transportation, heavy industry, energy production, and forest fires.[141] Indoor air pollution usually results from household combustion devices that are largely used for heating and cooking.[142] Air pollution has become a growing concern for many Member States due to the rising number of poor air quality incidents where long-term exposure poses a significant health risk, typically in the form of cardiovascular diseases and lung cancer.[143] Record heat and dry conditions in the Pacific Northwest and California regions of the United States have led to numerous wildfires, resulting in unprecedented numbers of air quality warnings from cities in the region.[144] Air pollution has become so prevalent that it kills as many people as cancer does annually.[145]

Short-lived climate pollutants (SLCPs) are agents that live in the atmosphere for anywhere from a few days to decades and have a warming influence on the climate, contributing to climate change.[146] These pollutants include soot, methane, hydrofluorocarbons, and greenhouse gasses, and they come from a variety of sources including energy generation, agriculture, improper waste management, and transportation.[147] Approximately 4.3 million deaths annually are attributed to increased acute respiratory infections, lung cancer, and susceptibility to heart attacks and strokes caused by exposure to SLCPs.[148] SLCPs also represent a major threat to food security; black carbon-based SLCPs reduce the quality of sunlight and increases ozone concentration, which is toxic to many plants.[149] Approximately 50 million tons of crops are lost annually as a result of SLCPs.[150] Food insecurity leads to increased cases of malnutrition, and particularly threatens areas where arable land is already limited, such as in parts of sub-Saharan Africa and the Middle East.[151] WHO has identified a number of SLCP mitigation options, mostly focused on policy changes.[152] Proposed policy shifts include encouraging active transit, such as biking and walking, and

[133] UNEA, *Strengthening the role of the United Nations Environment Programme in promoting air quality (UNEP/EA.1/Res.7)*, 2014, pp. 23-24.
[134] UNEA, *Mainstreaming of biodiversity for well-being (UNEP/EA.2/Res.16)*, 2016.
[135] WHO, *Health and Environment Linkages Initiative*, 2017.
[136] CCAC, *About*, 2017.
[137] WHO, *Ambient air pollution: A global assessment of exposure and the burden of disease*, 2016, p. 11.
[138] Ibid., p. 16.
[139] UN Statistics Division, *Glossary of Environment Statistics*, 1997, p. 3.
[140] CCAC, *Science – Short-lived Climate Pollutants*, 2017.
[141] WHO, *Health risks of ozone from long-range transboundary air pollution*, 2008, pp. 23-24.
[142] Ibid., p. 21.
[143] WHO, *Health risks of ozone from long-range transboundary air pollution*, 2008, p. 18.
[144] NASA, *Smoke and Fires Light Up Pacific Northwest*, 2017.
[145] UN DPI, *Pollution kills as many people as cancer does, UN's new environment chief warns*, 2016.
[146] CCAC, *Science – Short-lived Climate Pollutants*, 2017.
[147] WHO, *Reducing Global Health Risks Through Mitigation of Short-Lived Climate Pollutants*, 2015, p. 2.
[148] Ibid., p. 1.
[149] Ibid., p. 7.
[150] CCAC, *Science – Short-lived Climate Pollutants*, 2017.
[151] WHO, *A WHO multicountry study on improving household food and nutrition security for the vulnerable*, 2002.
[152] CCAC, *Science – Short-lived Climate Pollutants*, 2017.

stronger emissions and efficiency standards for vehicles.[153] Outdoor air pollution makes up the majority of reports and environmental studies, though it lacks the same granularity of measurements for indoor air pollution, especially in developing countries where indoor air pollution is more common.[154] Increasing awareness of the health impacts of air pollution, especially in developing countries, may help drive policy that aims to reduce air pollution and mitigate its harmful effects.[155] Furthermore, as air pollution affects regions well outside its origins, it will require collaboration and coordination between neighboring states and beyond.[156]

Water Pollution

Safe and sanitary access to clean water is paramount to ensuring good health and quality of life.[157] In 41 Member States, one in five people still use unimproved sources of water, such as natural lakes and rivers.[158] Pollutants such as untreated human waste and chemicals from industrial waste contaminate water and contribute to poor sanitation, enabling the transmission of diseases such as diarrhea, dysentery, and cholera, which are linked to the deaths of around 842,000 people annually.[159] In 2015, approximately 29% of the global population lacked access to a safely managed drinking water service free from contamination.[160] Additionally, 61% of the global population does not have access to a service that safely disposes of human waste, which raises the risk of contaminating local water supplies.[161] Safe and secure access to water varies greatly depending on geographic location, with Oceania and sub-Saharan Africa having the largest gaps in access compared to developed countries.[162]

It can be especially difficult in developing countries to finance the improvement of natural water sources and the provision of water in areas without their own natural source.[163] Natural water sources are more likely to be contaminated through air and ground pollution due to little to no filtering available.[164] In many areas with high levels of water pollution, there is a lack of infrastructure to properly treat the water or to bring water in from clean sources, forcing people to consume and use contaminated water.[165] In addition to challenges in improving water quality, some regions may have challenges responding to disease caused by pollutants due to weak health care infrastructure; as a result, those impacted by water pollution in these areas have higher mortality rates.[166] In some instances, fiscal limitations increase the likelihood that infrastructure is developed poorly or below standard.[167] Poorly developed infrastructure has the potential to limit distribution or even contaminate water sources further, such as lead poisoning through lead pipes.[168]

Some states have been successful in mitigating the effects of water pollution; in China, the improvement of water supply and sanitation facilities in remote villages decreased illnesses in people by 6% and completely eliminated infections in livestock.[169] Technological improvements in collection, piping, and treatment would greatly improve the accessibility and the affordability of clean water in areas that are water stressed.[170] By ensuring water sources are clean and secure, and waste is properly handled and treated, susceptibility to waterborne illnesses will likely decrease.[171]

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[153] Ibid.
[154] WHO, *Reducing Global Health Risks Through Mitigation of Short-Lived Climate Pollutants*, 2015.
[155] Ibid., p. 7.
[156] Ibid., pp. 111-115.
[157] WHO & UNICEF, *Safely managed drinking water*, 2017, p. 1.
[158] Ibid., p. 18.
[159] WHO, *Drinking-Water – Fact Sheet*, 2017.
[160] WHO & UNICEF, *Progress on Drinking Water, Sanitation, and Hygiene*, 2017, p. 3.
[161] Ibid., p. 4.
[162] WHO & UNICEF, *Safely managed drinking water*, 2017, p. 19.
[163] Ibid., p. 13.
[164] Ibid., p. 10.
[165] WHO, *Water Quality & Health Strategy 2013-2020*, 2013, p. 7.
[166] Ibid., p. 1.
[167] WHO & UNICEF, *Safely managed drinking water*, 2017, p. 37.
[168] WHO, *Food Safety*, 2015.
[169] WHO, *Preventing Disease Through Healthy Environments – A Global Assessment of the Burden of Disease from Environmental Risks*, 2016, p. 24.
[170] WHO & UNICEF, *Safely managed drinking water*, 2017, p. 13.
[171] Ibid., pp. 22-25.

Soil Pollution

Although soil pollution is not a new development, research on its health impacts has a historically lower profile than that of air and water pollution, as it is more difficult to detect and trace its origins due to the varied chemical composition of soil around the world.[172] Soil pollution refers to out-of-place or higher concentrations of chemicals in soil on land, which are the result of human activity through heavy industry, farming, and human and synthetic waste.[173] The consumer electronic industry is one of the fastest growing industries, which has led to a proportional increase in electronic waste, or e-waste.[174] The rapid growth and development of the industry has left exports and handling of e-waste largely unregulated.[175] E-waste can take many forms, but it most commonly refers to the disposal of consumer electronics such as refrigerators, air conditioning units, and cell phones.[176] While e-waste is largely associated with developed countries due to the higher consumption of electronics, economic incentives and low regulation have enabled developed countries to sell increasing quantities of e-waste to developing countries.[177] E-waste that is improperly disposed of generates soil pollution when heavy metals, such as lead or cadmium, degrade and mix with water and soil.[178] Exposure to heavy metals greatly increases the risk for skin, prostate, and ovarian cancers.[179] In pregnant women and younger children, exposure to heavy metals can lead to developmental issues and intellectual impairment, as well as major organ failure and various neurological disorders.[180] In 2014, an estimated 41.8 million tons of e-waste were generated, and this annual quantity is expected to grow to 49.8 million tons by 2018.[181]

While direct exposure to soil pollution is dangerous to humans, it is especially harmful to crops.[182] Food can be contaminated by pollutants at any point in its lifecycle, though it is most susceptible to contamination during production in areas with high levels of soil pollutants.[183] Excessive soil pollutants exacerbate food insecurity by hindering plant metabolism and reducing crop productivity.[184] Additionally, the consumption of crops exposed to soil pollutants is more likely to introduce foodborne illnesses.[185] In order to keep up with population growth, the agricultural industry has taken measures to increase crop yields.[186] This has led to an increase in the use of chemical fertilizers that, if improperly used or not washed from food, can lead to acute food poisoning.[187] WHO estimates there are 420,000 deaths annually due to consumption of contaminated food, including food contaminated by pollutants; approximately 40% of all cases of foodborne diseases impact children under the age of five.[188] Foodborne diseases vary from nausea and diarrhea to more debilitating illnesses including organ failure and cancers.[189] The cycle of foodborne illnesses additionally perpetuates poverty and stifles economic development.[190]

The impact of foodborne diseases on public health and the economy is often underreported due to the difficulty in proving a causal relationship.[191] This lack of accurate reporting, in turn, makes it more difficult to target responses effectively.[192] Understanding the most dangerous pollutants, establishing clear causal links between soil pollution

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[172] European Commission, *Soil Contamination: Impacts on Human Health*, 2013, p. 5.
[173] Ibid.
[174] UNEP, *E-Waste Vol. 1: Inventory Assessment Manual*, 2007.
[175] Ibid.
[176] UN University, *The Global E-Waste Monitor*, 2014, p. 12.
[177] Ibid., pp. 34-35.
[178] UN DPI, *UN environment chief warns of 'tsunami' of e-waste at conference on chemical treaties*, 2015.
[179] WHO, *Preventing Disease Through Healthy Environments – A Global Assessment of the Burden of Disease from Environmental Risks*, 2016, pp. 46-50.
[180] WHO, *Food Safety*, 2015.
[181] UN University, *The Global E-Waste Monitor*, 2014, p. 22.
[182] WHO, *Food Safety*, 2015.
[183] Ibid.
[184] UN DPI, *Country-level action 'new frontier' for tackling soil pollution – UN agriculture agency*, 2017.
[185] WHO, *Food Safety*, 2015.
[186] Ibid.
[187] Ibid.
[188] Ibid.
[189] WHO, *WHO Estimates of the Global Burden of Foodborne* Diseases, 2015, p. 3.
[190] Ibid.
[191] WHO, *Food Safety*, 2015.
[192] UN DPI, *Country-level action 'new frontier' for tackling soil pollution – UN agriculture agency*, 2017.

and disease, and developing strategies and tools to mitigate the impacts of pollution will be paramount to addressing it and taking preventive measures to protect human health.[193]

Conclusion

Environmental issues, such as pollution, are transnational by nature and necessitate international collaboration.[194] Mitigating the impact of all types of pollution has a positive effect on both the environment and individual health.[195] Air pollution in particular is responsible for an increase in deaths due to cardiovascular diseases and lung cancers.[196] The reduction of SLCPs would significantly improve the quality of life through reduced susceptibility to disease and improved agricultural output.[197] Water, which is a finite shared resource, is another commonly polluted source.[198] Providing safe and secure water sources and proper sanitation systems is a tangible way to improve the current situation, but the technology to provide clean water and sanitation remains out of reach for many developing countries due to lack of funding, accessibility, and infrastructure.[199] Lastly, although statistically underrepresented, soil pollution is a growing problem and is being credited with causing an increasing number of foodborne illnesses.[200] Soil pollution also poses a significant threat to food security, impairing the quantity and quality of crops grown.[201] Broadly, pollution has severe consequences for human health and there are many barriers to the prevention and treatment of related illnesses and conditions.[202] Transnational cooperation to support infrastructure, complete research, and share best practices will be paramount to reducing and mitigating the harmful effects of pollution on human health.[203]

Further Research

Delegates should consider the following questions when researching this topic: What can the international community do to better protect women and children from pollution, especially in developing areas? How can the issue of health-damaging pollutants be addressed when it crosses transnational borders? What can be done to improve data collection on the health impacts of pollution? How can the agriculture industry keep up with growing demand for food while still maintaining low levels of chemical pollutants in the soil? How can waste management scale to meet the demand and health concerns of newly generated forms of electronic waste?

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Climate & Clean Air Coalition. (2017). *Science – Short-lived Climate Pollutants* [Website]. Retrieved 16 July 2017 from: http://www.ccacoalition.org/en/science

> *This website provides a basic introduction on SLCPs. This website can be used to better understand what the different types of SLCPs are and the impact that they have on the environment and on public health. Lastly, this website is a gateway for finding more in-depth information and statistics around current action and research on SLCPs, as well as the wide-ranging benefits and remaining uncertainties of reducing SLCP emissions.*

United Nations University. (2014). *The Global E-Waste Monitor*. Retrieved 18 August 2017 from: https://i.unu.edu/media/unu.edu/news/52624/UNU-1stGlobal-E-Waste-Monitor-2014-small.pdf

> *This document was published in response to the increasing amount of electronic waste being produced annually by consumers. Delegates can use this resource to establish context on what electronic waste is and its health effects, particularly through soil pollution. This report does a*

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[193] Ibid.
[194] WHO, *An estimated 12.6 million deaths each year are attributable to unhealthy environments*, 2016.
[195] Ibid.
[196] Ibid.
[197] WHO, *Reduce short-lived climate pollutants for health development and climate co-benefits: COP 19 events focus on synergies*, 2014.
[198] WHO, *Drinking-Water – Fact Sheet*, 2017.
[199] WHO & UNICEF, *Progress on Drinking Water, Sanitation, and Hygiene*, 2017, pp. 24-25.
[200] WHO, *Food Safety*, 2015.
[201] Ibid.
[202] WHO, *An estimated 12.6 million deaths each year are attributable to unhealthy environments*, 2016.
[203] Ibid.

region-by-region case study to highlight the differences in how electronic waste producers and consumers interact. Additionally, it offers potential solutions to improving the handling of electronic waste while reducing the overall environmental impact.

World Health Organization. (2008). *Health risks of ozone from long-range transboundary air pollution.* Retrieved 16 July 2017 from: http://www.euro.who.int/__data/assets/pdf_file/0005/78647/E91843.pdf
Long-range transboundary air pollution was one of the first major types of pollution addressed at an international level. This document discusses the various health impacts, most notably non-communicable diseases such as cancers and heart disease, caused by air pollutants that traverse national borders. This resource is also helpful in identifying areas of success and areas of improvement with regards to international actions. It can also be used to identify gaps in both international and national policies especially for developing countries.

World Health Organization. (2015). *Food Safety*. Retrieved 8 September 2017 from: http://www.who.int/mediacentre/factsheets/fs399/en/
This factsheet provided by WHO enables delegates to quickly understand the link between health and food safety. While pollution is not the main topic here, this fact sheet does discuss how different types of water and soil pollution, notably from chemicals and heavy metals, impact the production of food and the various ways affected food harm human health. Lastly, this source discusses ways that policy can better address food security and health. Delegates can use this resource to understand the ways WHO works with Member States to improve food security while preventing the spread of foodborne diseases.

World Health Organization. (2015). *Reducing Global Health Risks Through Mitigation of Short-Lived Climate Pollutants*. Retrieved 16 July 2017 from: http://apps.who.int/iris/bitstream/10665/189524/1/9789241565080_eng.pdf
Developed as a policy-relevant summary on the benefits of mitigating short-lived climate pollutants to protect health, this report combines relevant research from environmental and health perspectives on pollutants. This report focuses on short-lived climate pollutants and how they impact other health-related issues, including the role of ozone, food security and nutrition, and global climate change. This report also discusses a number of mitigation strategies through a series of successful case studies. Overall, this report is a great entry point into the topic as it provides helpful context on previously conducted research while allowing for interpretation on expanding potential solutions.

World Health Organization. (2016). *Ambient air pollution: A global assessment of exposure and the burden of disease*. Retrieved 16 July 2017 from: http://apps.who.int/iris/bitstream/10665/250141/1/9789241511353-eng.pdf
Published in response to the growing concern about air pollution, this document focuses on the impact air pollution has on health and its broader-ranging impacts, such as economic costs. This document establishes a link between increased rates of disease in areas of higher air pollution. Additionally, this document looks into the economic impact of air pollution due to increased healthcare costs and reduced productivity, among other factors. This data can be used to supplement research on potential mitigation strategies as well as generate prediction models if pollution continues to increase at current rates.

World Health Organization. (2016). *Burning Opportunity: Clean Household Energy for Health, Sustainable Development, and Wellbeing of Women and Children*. Retrieved 16 July 2017 from: http://apps.who.int/iris/bitstream/10665/204717/1/9789241565233_eng.pdf
Women and children are among most vulnerable to experiencing the harmful health impacts of pollution. This report provides context on how this group is impacted by the energy sector, which is among the greatest sources of pollution. Household air pollution is particularly dangerous, causing around 4.3 million premature deaths annually. While WHO can provide high-level guidance and support, this report emphasizes the importance of local and national action in facilitating change on a large scale, especially with regards to how energy is generated and consumed. This report discusses different types of local initiatives that have been proven to reduce household air pollution and thereby improving the health of local occupants. Delegates can use this report to find proven local solutions that might be suitable for other Member States.

World Health Organization. (2016). *Preventing Disease Through Healthy Environments – A Global Assessment of the Burden of Disease from Environmental Risks*. Retrieved 16 August 2017 from: http://apps.who.int/iris/bitstream/10665/204585/1/9789241565196_eng.pdf

> *This report focuses on the various types of diseases and illnesses that can result from sustained exposure to consistently unhealthy environments. This document provides great statistical insight by correlating certain diseases with a polluted environment. It additionally offers insight into the relationship between non-communicable diseases and a polluted environment, such as cancers, mental disorders, and more. This document also provides resources to make comparisons and hypothesizes on the link between disease susceptibility and socioeconomic background and geographic location. Delegates can use this source to better understand the link between the various communicable and non-communicable diseases and the environment.*

World Health Organization, World Health Assembly. (2016). *Health and the environment – Draft road map for an enhanced global response to the adverse health effects of air pollution (A69/18)*. Retrieved 16 July 2017 from: http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_18-en.pdf

> *The 68th WHA adopted resolution WHA68.8, which called upon the Director-General to provide a road map for an enhanced global response to adverse health effects of air pollution; this report is the draft of that road map. Global awareness about the impact and danger of air pollution is constantly growing, however, the exact method for addressing air pollution remains a challenge. This report identifies potential policy options that could reduce air pollution while promoting good health, which may help delegates in crafting solutions to this problem.*

World Health Organization & United Nations Children's Fund. (2017). *Progress on Drinking Water, Sanitation, and Hygiene*. Retrieved 18 August 2017 from: https://washdata.org/report/jmp-2017-report-final

> *This report is a joint collaboration between WHO and UNICEF through the JMP. It provides raw data on the progress made toward SDG targets on a region-by-region basis. This report also defines common terminology used in other WHO reports, such as improved and unimproved drinking sources. Delegates can use this report to identify regional trends on water sources and sanitation provisions and correlate it back to the impact of water pollution on human health.*

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II. Improving Responses and Coordination in Addressing Mental Health

"In these Goals and targets, we are setting out a supremely ambitious and transformational vision. We envisage a world (...) with equitable and universal access to quality education at all levels, to health care and social protection, where physical, mental and social well-being are assured."[204]

Introduction

The World Health Organization (WHO) defines health as a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."[205] Mental health is an integral component of health, as healthy living conditions, mental health, and overall physical health are intertwined.[206] Multiple social, psychological, and biological determinants impact mental health conditions.[207] For instance, psychological factors, such as personality traits, and biological factors, such as brain chemical imbalances, may lead to mental disorders.[208] Mental health has to be distinguished from mental disorders, which refer to "disorders that cause a high burden of disease such as depression, bipolar affective disorder, schizophrenia, anxiety disorders, dementia, substance use disorders, intellectual disabilities, and developmental and behavioral disorders with onset usually occurring in childhood and adolescence, including autism."[209]

Individuals suffering from mental health conditions or mental disorders may experience social stigma, discrimination, and restrictions in the exercise of their civil and political rights.[210] Mental health patients often experience limited access to education and employment opportunities due to a lack of access to mental health, social, and emergency relief services, which in turn leads to low educational outcomes and higher rates of homelessness, unemployment, and poverty.[211] In fact, people suffering from mental disorders experience a 40-60% higher risk of premature death due to physical health problems, such as cardiovascular diseases, diabetes, and HIV infection.[212] Similarly, gender and age are factors that can increase mental health problems.[213] Women experience depressive episodes up to twice as much as men, though men are up to five times more inclined to commit suicide than women.[214] Likewise, children and youth are particularly vulnerable, as an estimated 20% of children and adolescents have mental health conditions or disorders and half of mental disorders present before the age of 14.[215]

WHO distinguishes the right to health from the right to be healthy as Member States should ensure all facilities, services, and necessary conditions to attain the highest level of health.[216] However, Member States do not need to ensure the attainment of a healthy life for its citizens because it may alter due to external factors, such as the individual's biological properties and socioeconomic conditions.[217] Rather, Member States should guarantee a minimum level of access to essential health components, such as maternal or child health services, within available resources without delay.[218] In 2016, only 3% of total government spending worldwide was for mental health, from less than 1% in low-income countries to 5% in high-income countries.[219] According to the World Bank, in order to ensure primary cost-effective mental health interventions packages, investments for mental health need to increase by five to eight times.[220]

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[204] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[205] WHO, *Constitution of the World Health Organization*, 1946, p. 1.
[206] WHO, *Mental Health: a state of well-being*, 2017.
[207] Ibid.
[208] Ibid.
[209] WHO, *Comprehensive Mental Health Action Plan 2013-2020*, 2013, p. 6.
[210] Ibid.
[211] WHO, *Mental health and development: Targeting people with mental health conditions as a vulnerable group*, 2010, pp. 1-25.
[212] WHO, *Comprehensive Mental Health Action Plan 2013-2020*, 2013, p. 7.
[213] WHO, *Fact sheets on sustainable development goals: health targets*, 2017, p. 3.
[214] Ibid.
[215] Ibid.
[216] UN OHCHR & WHO, *The Right to Health*, 2008, p. 5
[217] Ibid.
[218] Ibid.
[219] WBG & WHO, *Out of the Shadows: Making Mental Health a Global Development Priority*, 2016.
[220] Ibid., p. 13.

Improved mental health responses and coordination can lead to a higher standard of mental health, which correlates to higher educational achievements, increased productivity and incomes, improved interpersonal relationships, social connections and parenting, and an overall increased quality of health and life.[221] In order to achieve improved mental health care services, it is important to address the five core barriers WHO has identified to responses and coordination in addressing mental health: the absence of mental health considerations in the public health and funding agenda, the current management of mental health services, the lack of mental health's integration within primary care, the inappropriate and insufficient human resources for mental health, and the lack of public mental health leadership.[222] As the world's leading expert on health, WHO's technical support and leadership are essential in tackling mental health barriers.[223] As the international community continues working toward the achievement of the Sustainable Development Goals (SDGs), WHO's work in strengthening a stronger and more comprehensive response and coordination in addressing mental health issues is vital for a sustainable future for all.

International and Regional Framework

The right to health was first articulated in the *Constitution of the WHO* (1946), which requires the attainment of the highest standard of physical, mental, and social well-being to the enjoyment of all fundamental human rights.[224] The *Universal Declaration of Human Rights* (1948) identifies mental health as a prerequisite to the right to life, an adequate standard of living, and the realization of economic, social, and cultural rights.[225] The *Declaration of Alma-Ata*, adopted at the 1978 International Conference on Primary Health Care in Alma-Ata, identifies primary healthcare (PHC) as a prerequisite to the attainment of universal health, and urges Member States to involve social and economic sectors to collectively participate in the planning and implementation of the healthcare policies to achieve the highest level of health.[226] Further, the *International Convention on the Elimination of All Forms of Racial Discrimination* (1965) guarantees everyone's equal right to public health, medical care, and social and security services without racial, ethnical or national discrimination, although refugees, migrants, and visible or ethnic minorities can still experience restrained access to mental health or general health care services.[227] Similarly, the *Convention on the Elimination of All Forms of Discrimination against Women* (1979) stresses the importance of equal rights for men and women to specific mental health and well-being services.[228] The *Convention on the Rights of the Child* (1989) and the *International Covenant on Economic, Social and Cultural Rights* (1966) safeguard children's right to receive mental health care and rehabilitative services, and to protect children and youth from social and economic exploitation that hinder or alter their moral and mental health condition or development.[229] Additionally, the *Convention on the Rights of Persons with Disabilities* (CRPD) (2006) recognizes and promotes the right for persons with disabilities to have gender-sensitive health rehabilitation and the highest attainable standard of specialized mental health services.[230] The CRPD prohibits discrimination of any kind against persons with disabilities in the provision of health care or health care insurance, and forbids denial of health care services on the basis of disability.[231] The *Sendai Framework for Disaster Risk Reduction 2015-2030* (2015) stresses the importance of psychosocial support and mental health services for persons with mental health conditions in contexts of disaster risk reduction.[232] It encourages and coordinates international approaches that integrate disability and cultural perspectives in policies, practices, decision-making processes, and data collection and dissemination.[233]

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[221] WHO, *Mental health and development: Targeting people with mental health conditions as a vulnerable group*, 2010, p. 3; ILO & WHO, *Health and Work: Impact, Issues and Good Practices,* 2000, p. 5.
[222] WHO, *Mental Health Atlas 2014*, 2015, p. 9.
[223] WHO, *Global Strategy for Women's Children's and Adolescents' Health 2016-20130*, 2015.
[224] WHO, *Constitution of the World Health Organization*, 1946.
[225] UN General Assembly, *Universal Declaration of Human Rights (A/RES/217 A (III))*, 1948.
[226] WHO, *WHO called to return to the Declaration of Alma-Ata*, 2017.
[227] UN General Assembly, *International Convention on the Elimination of All Forms of Racial Discrimination (A/RES/2106 (XX))*, 1965.
[228] UN General Assembly, *Convention on the Rights of the Child (A/RES/44/25)*, 1989; UN General Assembly, *International Covenant on Economic, Social and Cultural Rights (A/RES/2200 (XXI))*, 1966.
[229] Ibid.
[230] UN General Assembly, *Convention on the Rights of Persons with Disabilities (A/RES/61/106)*, 2006.
[231] Ibid.
[232] UN General Assembly, *Sendai Declaration and Framework for Disaster Risk Reduction 2015-2030 (A/RES/69/283)*, 2015.
[233] UN University et al., *Mental Health, Well-being and Disability- A New Global Priority Key United Nations Resolutions and Documents*, 2015, pp. 2-8.

For the first time, *Transforming our world: the 2030 Agenda for Sustainable Development*, adopted on 25 September 2015 by the General Assembly, directly targets and declares mental health as a development priority through SDG 3, "ensure healthy lives and promote well-being for all at all ages."[234] Within the 2030 Agenda, mental health is placed on an equal stand to physical health, and Member States are urged to achieve equitable and universal access to health care and coverage to quality care by promoting mental health and social well-being.[235] Furthermore, the 2030 Agenda recognizes mental illness as a challenge for sustainable development and calls upon Member States to commit to the prevention and treatment of behavioral, developmental, and neurological disorders.[236] SDG 3 targets premature mortality from non-communicable diseases (NCDs) such as mental disorders, and promotes mental health and well-being.[237] Goal 3 also aims to strengthen the prevention and treatment of substance abuse, and to achieve universal health coverage, including financial risk protection, access to quality essential health care services, and access to safe, effective, quality and affordable essential medicines and vaccines for all.[238] The 2030 Agenda recognizes mental health's intrinsic value in the attainment of the highest standard of health and social well-being and its wide-ranging consequences.[239] For example, in 2013, depression among citizens of the European Union created estimated costs of €617 billion related to absenteeism, lost economic outputs due to unemployment, medical treatments and social welfare systems, and disability benefits.[240] Therefore, mental health problems represent a major burden that compromises economic growth (SDG 8) and increases rates of poverty (SDG 1).[241] Hence, WHO's continuous efforts in strengthening the response and coordination addressing mental health is vital to international development and the full achievement of the SDGs.[242]

Role of the International System

Key WHO resolutions related to this topic include resolution World Health Assembly (WHA) resolution 28.84 of 1975 on "Promotion of Mental Health," which urges Member States to include and strengthen mental health within their general health services and public health programs and to stimulate mental health research.[243] Additionally, resolution 29.21 of 1976 on "Psychosocial factors and health" confirms the important relationship between psychosocial factors and health, and especially mental health.[244] More recently, resolution 65.4 of 2012 on "The global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level" urges Member States to adopt a comprehensive and coordinated response at the national and regional level that includes health and social sectors.[245] Likewise, resolution 55.10 of 2002 on "Mental Health: responding to the call for action" stresses the need for further investments within bilateral and multilateral initiatives for mental health.[246] In 2017, the Secretariat acknowledged the urgency of addressing mental health and psychosocial issues of refugees and migrants, and the need of a multi-agency intervention.[247]

The *Mental Health Action Plan 2013-2020* guides WHO's approach until 2020.[248] The Action Plan identifies four major objectives in the field of mental health, including strengthening effective leadership; improving governance

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[234] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[235] Ibid.
[236] Ibid.
[237] Ibid.
[238] Ibid.
[239] WHO, *Fact sheets on sustainable development goals: health targets*, 2017, pp. 2-4.
[240] Ibid.; WHO, *WHO Quality Rights Tool Kit: Assessing and improving quality and human rights in mental health and social care*, 2012, pp. 1-13.
[241] WHO, *Fact sheets on sustainable development goals: health targets*, 2017, pp. 2-4.
[242] Ibid.
[243] UN University et al., *Mental Health, Well-being and Disability- A New Global Priority Key United Nations Resolutions and Documents*, 2015, pp. 2-8.
[244] Ibid.
[245] WHO, *The global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level (WHA65.4)*, 2012.
[246] WHO, *Mental Health: responding to the call for action (WHA55.10)*, 2002.
[247] WHO, *Promoting the health of refugees and migrants (WHA70/24)*, 2017; IOM & UNHCR, *Mental Health and Psychosocial Support for Refugees, Asylum Seekers and Migrants on the Move in Europe: a Multy-Agency Guidance note*, 2015, pp. 1-7.
[248] WHO, *Comprehensive Mental Health Action Plan 2013-2020*, 2013, p. 6; WHO, *Comprehensive mental health action plan 2013-2020 (WHA66.8)*, 2013.

information systems, evidence, and research for mental health; providing comprehensive, integrated, and responsive mental health and social care services in community-based settings; and implementing strategies for prevention and promotion of mental health.[249] The Action Plan bases its approaches and interventions on six multidimensional principles that include achieving universal health coverage (UHC); implementing existing international and regional frameworks; gender, age, and cultural sensitivity; collaboration with civil society; and fully integrating individuals with mental health condition to the society.[250] To achieve the Action Plan's objectives, WHO assists actors through technical guidance in the reorganization of mental health services, multi-sectoral resource planning, coordination of field related activities between stakeholders, and the formulation of human resources strategies, mental health promotion, and suicide prevention.[251]

WHO also develops mental health indicators and coordinates actors in the development and promotion of mental health research and in the implementation of technical tools that strengthen and empower persons with mental disorders or psychosocial disabilities, primarily by collating and disseminating evidence, best practices, and capacity-building policies and strategies.[252] WHO utilizes its Mental Health Evidence and Research (MER) team to best utilize available resources to address immediate needs for mental disorders interventions and mental health promotion.[253] MER oversees three core projects: the Mental Health Atlas, the World Health Organization Assessment Instrument for Mental Health Systems (WHO-AIMS), and Mental Health in Emergencies.[254] The WHO-AIMS collects essential data on activities that promote and restore mental health to provide guidelines for monitoring the progress.[255] The Mental Health Atlas gathers comprehensive information on the global mental health situation.[256] Mental Health in Emergencies offers psychosocial support to exposed populations, such as refugees, migrants, and internally displaced persons, in extreme stressor situations.[257]

Improving responses and coordination in addressing mental health requires a universal and comprehensive approach based on inter-agency partnerships and a harmonized system of coordinated and integrated services.[258] Civil Society Organizations (CSOs) play an essential part in delivering mental health care services by integrating mental health resources and solutions into a variety of services and advocating for policies and strategies that support people with mental or psychosocial disabilities.[259] CSOs participate in innovation programs as incubators for new ideas, develop inter-sectoral collaboration, and ensure a community and democracy building role.[260] Following the 2010 earthquake in Haiti, the Catholic Organization for Relief and Development Aid (CORDAID) and the Cooperation Aid Agencies jointly implemented the TROCAIRE and ECHO projects aiming to respond to mental health and psychosocial needs unaddressed by national or international actors.[261] CORDAID provided training to a local group of 80 community-level workers, eight non-governmental organization staff members, and 30 nurses and doctors on how to recognize mental health or psychosocial issues, create mental health individual or group intervention sessions, and identify severe distress cases.[262] However, a lack of resources and political will restrained the implementation of a National Mental Health Strategy and Policy in collaboration with the Ministry of Health of Haiti, which hindered the continuous and complete recovery of the earthquake-affected population.[263]

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[249] WHO, *Comprehensive Mental Health Action Plan 2013-2020*, 2013, p. 9.
[250] Ibid., p. 10.
[251] Ibid., pp. 11-19.
[252] Ibid.
[253] WHO, *Mental health evidence and research*, 2017.
[254] Ibid.
[255] WHO, *WHO-AIMS General information*, 2017; WHO, *Mental Health systems in selected low-and middle-income countries: a WHO-AIMS cross-national analysis*, 2009, pp. 7-14.
[256] WHO, *Mental Health Atlas 2014*, 2017.
[257] WHO, *Mental Health and Psychosocial support in Emergencies*, 2017.
[258] WHO, *New WHO Health Emergencies Programme to ensure more effective collaboration in health emergencies*, 2016; Zupancic & Pahor, *The role of non-governmental organizations in the mental health area: differences in understanding*, 2016, pp. 232-234.
[259] WHO, *Mental health and development: Targeting people with mental health conditions as a vulnerable group*, 2010, pp. 55-56; Zupancic & Pahor, *The role of non-governmental organizations in the mental health area: differences in understanding*, 2016, pp. 232-234.
[260] Ibid.
[261] CORDAID, *Mental and Psychosocial Support after Earthquake*, 2010.
[262] Ibid.
[263] Ibid.

In emergency settings, WHO collaborates with the Global Health Cluster to ensure effective, predictable, and efficient coordination of health services.[264] Furthermore, WHO partners with the Inter-Agency Standing Committee (IASC) and the Emergency Relief Coordinator to effectively coordinate humanitarian responses and ensure rapid local-capacity building on already present resources or assets that support mental health and psychosocial well-being.[265] Moreover, WHO partners with the Office of the UN High Commissioner for Refugees (UNHCR) to facilitate access to mental health and psychosocial support (MHPSS) services and prevent and control NCDs for refugees.[266] These partnerships are critical to the effective provision of mental health care, particularly in emergencies like natural disasters or armed conflict.[267]

Mental Health and Psychosocial Support in Emergencies

Worldwide, over 130 million people require humanitarian assistance; getting mental health care to people in these settings is challenging due to increased physical health problems, weakened health care systems, and rising coordination difficulties between agencies.[268] WHO, in partnership with IASC, plays a key role in helping Member States respond effectively to health emergencies.[269] In order to establish and coordinate multi-sectoral responses, WHO utilizes a three-step approach: emergency preparedness, emergency minimum responses, and emergency comprehensive responses.[270] Emergency preparedness refers to inter-agency preparedness, advocacy, and planning.[271] Emergency minimum responses, such as the assessment and the coordination of inter-sectoral services, are conducted in the midst of an emergency and require immediate implementation.[272] Emergency comprehensive responses, such as the development and the promotion of sustainable coordination structures that include governments, CSOs, and inter-agency strategic plans, are used during the stabilization and the early recovery phases.[273]

WHO's approach is guided by six core principles that aim to strengthen humanitarian responses, coordination, and advocacy through all steps of responses and by all stakeholders.[274] The core principles highlight respecting equality and human rights for all, civil society participation, capacity building, and gender and cultural sensitivity.[275] The multi-layered approach is important because the support layers meet the needs of affected individuals, families, communities, and the society itself, by building on local capacities and sustaining and strengthening already present resources.[276] Among its health programs, WHO relies on the Health Emergencies Programme that helps Member States address the complete risk management cycle of prevention, preparedness, response, and early recovery with flexible, immediate, and effective responses as it centralizes WHO's intervention and utilizes one workforce, one budget, one line of accountability, one set of processes, and one set of benchmarks.[277] This strategy has enabled WHO to effectively respond to Hurricane Matthew in Haiti by anticipating and prepositioning cholera supplies in at-risk areas, and by evaluating health services and structures to prioritize medical needs.[278]

Including Mental Health in Universal Health Coverage

In order to achieve improved responses and coordination in addressing mental health, mental health needs to be prioritized within national and international agendas, and stakeholders need to commit to quality and innovative

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[264] WHO, *New WHO Health Emergencies Programme to ensure more effective collaboration in health emergencies*, 2016.
[265] Ibid.
[266] UNHCR, *Global Strategy for Public Health Public Health - Hiv and Reproductive Health - Food Security and Nutrition Water, Sanitation and Hygiene (WASH)*, 2014, p. 25.
[267] WHO, *New WHO Health Emergencies Programme to ensure more effective collaboration in health emergencies*, 2016.
[268] WHO, *Building Back Better: Sustainable mental health care after emergencies*, 2013, p. 16.
[269] IASC, *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, 2007, p. 23.
[270] Ibid.
[271] Ibid.
[272] Ibid.
[273] Ibid.
[274] Ibid., p. 7.
[275] Ibid., pp. 9-12.
[276] Ibid., p. 11.
[277] WHO, *Helping countries to respond rapidly and effectively to health emergencies*, 2016, p. 1.
[278] IASC, *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, 2007, p. 12.

services, convey resources toward mental health systems, and strengthen community services.[279] UHC represents a possible avenue to improving responses and coordination in addressing mental health.[280] According to WHO, UHC refers to global and equitable access to efficient preventive, promotive, curative, and rehabilitative health services to protect individuals from financial impoverishment caused by health care services expenditures.[281] In other words, UHC aims to reduce the gap among access, need, and use of services, and to improve quality and enhance financial protection.[282] However, UHC cannot be achieved without properly addressing mental health, which requires further national and international efforts toward health system strengthening (HSS).[283] HSS is a process that identifies and implements policy and practice changes in a country's health system to efficiently address and respond to its health system challenges.[284] HSS mobilizes and prioritizes the allocation of financial resources for health, and works toward improving health systems' capacities in economic, fiscal, institutional, and political contexts.[285]

WHA resolution 58.24 of 2005 introduced an alternative approach to achieving UHC, which is eHealth.[286] eHealth refers to productive and secure use of information and communication technologies (ICTs) in support of health-related fields by providing care services, health surveillance, education, knowledge, and research to health professionals and citizens.[287] Despite WHO's endorsement, in 2016 only 58% of Member States possessed an eHealth strategy.[288] Utilizing big data in the mental health sector offers new opportunities for harnessing information through eHealth programs.[289] Big data comprises high velocity, variety, and volume data that requires significant capture, storage, and management capacities.[290] Volume indicates data's magnitude, that varies from terabytes to petabytes, variety reflects data's structural heterogeneity, and velocity indicates data's generating and analyzing speed rate.[291] Harnessing big data through eHealth programs integrates community and individual perspectives in information systems for UHC and gathers valuable field-based data.[292] However, only 33% of Member States gather mental health service data generated by the public sector and less than 17% of Member States have a policy regulating big data in the health sector.[293] Further promotion of ICTs and the use of big data as essential and central components will alleviate the data burden undertaken by health professionals and enhance the quality of mental health data.[294]

Conclusion

Improving coordination and responses to mental health is essential to achieve not only enhanced global mental health conditions but efficient humanitarian interventions, UHC, and resilient communities.[295] It is key to understand that improving mental health through enhanced responses and coordination will benefit not only SDG 3, but also other SDGs, such as SDG 8 for economic growth and decent jobs.[296] Stronger support from Member States and international actors to WHO's leadership is required to make mental health a priority and to channel further resources toward mental health systems.[297] Indeed, these goals cannot be attained without devoting additional

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[279] WBG & WHO, *Out of the Shadows: Making Mental Health a Global Development Priority*, 2016, p. 16.
[280] Ibid.
[281] WHO, *Sustainable health financing, universal coverage and social health insurance (WHA58.33)*, 2005; WHO, *Sustainable Health Financing Structures and Universal Coverage (WHA64.9)*, 2011, pp. 1-4.
[282] WHO, *Strategizing National Health in the 21st Century: A Handbook, 2016,* p. 4.
[283] Ibid.
[284] Ibid.
[285] Ibid., p. 5.
[286] WHO, *eHealth (WHA58.28)*, 2005, pp. 1-2.
[287] Ibid.
[288] WHO, *Global diffusion of eHealth: Making universal health coverage achievable*, 2016, pp. 11-18.
[289] Ibid., pp. 143-44.
[290] Gandoni & Haider, *Beyond the hype: Big data concepts, methods, and analytics*, 2015, pp. 137-144.
[291] Ibid., pp. 137-144.
[292] WHO, *Global diffusion of eHealth: Making universal health coverage achievable*, 2016, pp. 145.
[293] Ibid., p. 11.
[294] Ibid., p. 14.
[295] ILO & WHO, *Health and Work: Impact, Issues and Good Practices*, 2000, pp. 5-6.
[296] WHO, *Fact sheets on sustainable development goals: health targets*, 2017, pp. 2-4.
[297] WBG & WHO, *Out of the Shadows: Making Mental Health a Global Development Priority*, 2016, p. 16.

resources toward community-based mental health programs, the global health system, and services for mental health.[298]

Further Research

To further their research, delegates should bear in mind ways of addressing the main barriers to mental health: mental health's inclusion within national health policies, promotion of mental health through anti-stigma and education campaigns, mental health funding, and the utilization of ICTs and big data to collecting mental health data.[299] What cost-efficient, affordable and feasible interventions can be integrated into primary care as part of a progressive realization of UHC that will generate returns on mental health? How can WHO mobilize a global coalition for action and a scaled-up implementation of mental health programs? How can mental health programs be better integrated and strengthen into general health services, school curricula and occupational health schemes in order to better promote mental well-being and to coordinate across these platforms?

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http://www.who.int/mental_health/emergencies/9781424334445/en/
> *This report is essential for agencies, worldwide practitioners, organizations, and individuals. It provides information on how to respond to emergency situation through comprehensive responses. Delegates need to consider this resource in order to deepen their understanding about the steps that addressing mental health in humanitarian emergencies require before suggesting a series of potential solutions that can be envisioned.*

Office of the United Nations High Commissioner for Human Rights & World Health Organization. (2008). *The Right to Health* [Report]. Retrieved 18 July 2017 from:
http://www.ohchr.org/Documents/Publications/Factsheet31.pdf
> *This document explains the dimensions of the right to health and its extent within international human rights law. The information is useful to delegates as it offers an extensive overview of national, regional, and international accountability and monitoring mechanisms by which Member States should comply. Delegates can use this resource in order to elaborate solutions that respect all the actors' rights that intervene the addressing mental health.*

World Bank Group & World Health Organization. (2016). *Out of the Shadows: Making Mental Health a Global Development Priority*. Retrieved 22 August 2017 from:
http://documents.worldbank.org/curated/en/270131468187759113/pdf/105052-WP-PUBLIC-wb-background-paper.pdf
> *This collaborative report between WHO and the World Bank assesses the impact of mental health conditions on economic development through multiple economic indicators. The report identifies three areas of intervention, including increasing visibility, strengthening programs, and devoting additional resources to mental health conditions. Delegates may utilize this report to identify solutions and areas of intervention in addressing mental health.*

World Health Organization. (2009). *Mental Health systems in selected low-and middle-income countries: a WHO-AIMS cross-national analysis*. Retrieved 20 July 2017 from: http://www.who.int/mental_health/evidence/WHO-AIMS/en/
> *The report summarizes the data national health systems gathered by low and middle income States that use WHO-AIMS health indicators. It provides a better understanding of the countries' national health systems' gaps in addressing mental health. Delegates should utilize this resource to achieve the Mental Health Gap Action and propose plans that strengthen the community care in addressing mental health throughout WHO-AIMS guidelines.*

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[298] Ibid.
[299] WHO, *Mental Health Atlas 2014*, 2015, p. 9.

World Health Organization. (2012). *WHO Quality Rights Tool Kit: Assessing and improving quality and human rights in mental health and social care facilities*. Retrieved 18 July 2017 from: http://www.who.int/mental_health/publications/QualityRights_toolkit/en/

> *The WHO tool kit is based on the United Nations Convention on the Rights of Persons with Disabilities. It provides low-middle- and high-income countries with relevant information and guidelines for assessing and improving human right standards and overall quality of care in mental health institutions. This tool kit is an essential resource as it provides delegates with practical guidance on how to promote and ensure the rights of people with disabilities.*

World Health Organization. (2013). *Comprehensive Mental Health Action Plan 2013-2020*. Retrieved 16 July 2017 from: http://www.who.int/mental_health/action_plan_2013/en/

> *The 2013-2020 Action Plan is a fundamental resource for delegates as it guides WHO's approach on mental health till 2020. It provides the major objectives and their specific targets, as well as indicators measuring Member States' progress. Delegates can familiarize themselves with this resource in order to acknowledge how to properly address the achievement of SDG 3.4 throughout WHO's interventions and strategies.*

World Health Organization. (2015). *Mental Health Atlas 2014.* Retrieved 16 July 2017 from: http://www.who.int/mental_health/evidence/atlas/mental_health_atlas_2014/en/

> *This is a primary source of information on the global mental health situation, and serves as a complementary resource to the Action Plan 2013-2020 by providing data on the progress toward the accomplishment of the Plan's objectives and targets. This resource analyzes mental health governance, financing, service availability, promotion and prevention. Delegates may find this report useful as it has a global overview of mental health around the globe.*

World Health Organization. (2016). *Global diffusion of eHealth: Making universal health coverage achievable*. Retrieved 16 July 2017 from: http://www.who.int/goe/publications/global_diffusion/en/

> *This summarizes all the measures and strategies put forward to achieve UHC through the use of ICTs in both developed and developing countries. This report is a valuable resource for delegates because it showcases the importance of emerging platforms, such as social media, in the field of health care as well as in the realization of SDG 3.8 through innovative techniques. It also suggests complementary means of achieving UHC through ICTs such as eHealth.*

World Health Organization. (2016). *Strategizing National Health in the 21st Century: A Handbook.* Retrieved 18 July 2017 from: http://www.who.int/healthsystems/publications/nhpsp-handbook/en/

> *This resource is based on WHO's and its partners' gathered experience during the Millennium Development Goals era on implementing national health systems. It suggests approaches on national health policies, strategies, and plans that may engineer a more sustainable global health environment in accordance with SDG 3. This is a pertinent resource for identifying feasible and updated pathways of action during the conference.*

World Health Organization. (2017). *WHO Country Cooperation Strategy 2017-2021 Sierra Leone*. Retrieved 16 July 2017 from: http://apps.who.int/iris/handle/10665/258610

> *This resource is a strategy plan established by WHO and the government of Sierra Leone that implements and develops national health policies and action plans that comply with WHO's mental health goals and requirements. It highlights the importance of cooperation in assessing NCDs and mental health problems in early recovery situations. Delegates can use this resources as a concrete example of a national implementation of WHO's mandate and work.*

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III. Vaccination to Promote Global Public Health

"Over this decade, we believe unbelievable progress can be made, in both inventing new vaccines and making sure they get out to all the children who need them. We could cut the number of children who die every year from about 9 million to half of that, if we have success on it."[300]

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.[301] 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.[302] 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.[303] 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.[304]

Vaccinations and immunizations are progressive technology that can help promote public health and save millions of lives.[305] 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 that stimulates the production of antibodies, to stimulate a person's immune system to alleviate the possibility of becoming infected and spreading that disease.[306] 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.[307] Herd immunity is important because it protects people who cannot be immunized, including infants, geriatric adults, and those who are immune-deficient.[308] In this sense, vaccination and immunization are not only individual protections but provide far-reaching societal benefits that protect especially vulnerable populations.[309]

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.[310] While there has been significant progress in vaccine distribution and overall immunization rates, several challenges remain.[311] WHO strives to provide access to vaccines to all people, but cost, poor distribution networks, and unreliable access prevents equal access to vaccines globally.[312] Even when vaccines are available and accessible, myths and safety concerns may prevent individuals from accepting the vaccines, thereby threatening herd immunity.[313] Additionally, there are many serious communicable diseases for which a vaccine has not yet been developed, most notably HIV.[314]

International and Regional Framework

The *Constitution of the World Health Organization* (1946) asserts that equal access to public health is a necessary human right.[315] 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

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[300] Dellorto, Bill Gates: Vaccine-autism link 'an absolute lie', *CNN,* 2011.
[301] WHO, *Immunization Coverage*, 2017.
[302] *Measles vaccination has saved an estimated 17.1 million lives since 2000*, WHO, 2015.
[303] Ibid.
[304] WHO, *Immunization Coverage*, 2017.
[305] WHO, *World Immunization Week, 24-30 April 2017*, 2017.
[306] WHO, *Immunizations, 2017.*
[307] Andre et al., *Vaccination greatly reduces disease, disability, death and inequity worldwide*, 2008.
[308] Ibid.
[309] Ibid.
[310] WHO, *Immunization Coverage*, 2017.
[311] Ibid.
[312] WHO, *World Immunization Week, 24-30 April 2017*, 2017.
[313] WHO, *Six common misconceptions about immunizations*, 2017.
[314] WHO, *WHO-UNAIDS HIV Vaccine Initiative: Mission and Activities*, 2017.
[315] WHO, *Constitution of the World Health Organization*, 1946.

work for disease eradication.[316] 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.[317]

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.[318] 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.[319] 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."[320] The need for children to be vaccinated is recognized under the *Convention on the Rights of the Child.* (CRC) (1989).[321] 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."[322]

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.[323] 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.[325] 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).[327] The goal was to bring Member States, non-governmental organizations (NGOs), and WHO together to create a strategy during the Decade of Vaccines (DoV).[328] 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.[329] 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.[330] 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.[331]

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.[332] 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.[333] The declaration also notes the need to work on these goals collaboratively with regional entities, international organizations, and NGOs.[334]

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[316] International Health Conference, *Constitution of the World Health Organization*, 1946.
[317] WHO, *Summary of the record of the first meeting of the World Health Assembly*, 1948.
[318] UN General Assembly, *Universal Declaration of Human Rights (A/RES/217 A (III))*, 1948, art. 25.
[319] Ibid.
[320] UN General Assembly, *International Covenant on Economic, Social and Cultural Rights (A/RES/2200 (XXI))*, 1966.
[321] UN General Assembly, *Convention on the Rights of the Child (A/RES/44/25)*, 1989.
[322] Ibid.
[323] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[324] Ibid.
[325] Ibid.
[326] Ibid.
[327] WHO, *Global Vaccine Action Plan 2011-2020*, 2012.
[328] Ibid.
[329] Ibid.
[330] WHO, *Addressing Global Shortages of Medicines and Vaccines (WHA69.25)*, 2014.
[331] Ibid.
[332] WHO, *Historic commitment from African Heads of State to advance immunization in Africa*, 2017.
[333] Ibid.
[334] Ibid.

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.[335] 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.[336] 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.[337] 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.[338]

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.[339] 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.[340] 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.[341] Additionally, UNICEF collaborated with WHO and the World Bank on *State of the World's Vaccines and Immunizations* (2009).[342] 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.[343] WHO and UNICEF have been working together to develop vaccine action plans including GIVS.[344] The World Bank's financing capabilities are also a key component in ensuring that vaccines are made economically accessible.[345] 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.[346] They have continued with this initiative, and in 2016 they provided funding for 57 GAVI-eligible states for the pneumococcal vaccine.[347] This funding supports GAVI's work in achieving its "Aspiration Indicators" by 2020.[348]

The creation of new vaccines is a key area of work for the international system.[349] 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.[350] 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.[351] 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.[352] This includes current research for vaccines against diseases like HIV, Zika, dengue, and

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[335] WHO, *70th World Health Assembly*, 2017.
[336] WHO, *Documentation, EB140*, 2017.
[337] WHO, *Global Vaccines Action Plan (A70/25)*, 2017.
[338] Ibid.
[339] UNICEF, *Immunization*, 2017.
[340] UNICEF, *Immunization Keeping Children Alive and Healthy*, 2012.
[341] UNICEF, *Progress and Challenges with Achieving Universal Immunization Coverage: 2015 Estimates of Immunization Coverage*, 2016.
[342] World Bank et al., *State of the World's Vaccines and Immunizations, Third Edition*, 2009.
[343] Ibid.; World Bank, *Millions of Children to be Protected from Deadly Diseases through Unique Global Vaccine Bond Issuance*, 2013.
[344] WHO, *Global Immunization and Vision Strategy*, 2017.
[345] Ibid.
[346] World Bank et al., *State of the World's Vaccines and Immunizations, Third Edition*, 2009.
[347] GAVI, *Pneumococcal AMC*, 2017.
[348] GAVI, *2016-2020 Strategy Indicator Definitions*, 2016.
[349] WHO, *Research and Development*, 2017.
[350] UN General Assembly, *Consolidating gains and accelerating efforts to control and eliminate malaria in developing countries, particularly in Africa, by 2030 (A/RES/70/300)*, 2016.
[351] Ibid.
[352] WHO, *Research and Development*, 2017.

tuberculosis, among others.[353] 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.[354] 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.[355]

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.[356] 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.[357] 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.[358] Save the Children also works on vaccination campaigns and focuses on eradicating vaccine-preventable diseases like measles.[359] Save the Children, along with GAVI and Member States, has immunized 440 million children.[360]

Promoting Equal Access to Vaccines

Inequalities continue to persist in the delivery of vaccines, as noted in the *World Health Statistics 2016* report.[361] 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.[362] One primary contributor to this issue is a lack of properly trained personnel to administer vaccines.[363] 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.[364] Lack of access also stems from a lack of medical facilities and reliable refrigeration for live vaccines.[365] Access can also vary within countries, as urban areas typically have better access to technology, personnel, and transportation than rural areas.[366] 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.[367]

Vulnerable and marginalized groups are the most impacted by public health inequality.[368] 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.[369] One way to address inequality and improve access is to help build capacity at the local level.[370] 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.[371] 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.[372] The campaign's goal is to

[353] WHO, *Disease-specific areas of work*, 2017.
[354] WHO, *Research and Development*, 2017; WHO, *Disease-specific areas of work*, 2017.
[355] NIAID, *Ebola Vaccines*, 2016; NIAID, *History of HIV Vaccine Research*, 2017.
[356] Bill and Melinda Gates Foundation, *Vaccine Delivery Strategy Overview*, 2017.
[357] Ibid.
[358] WHO, *About the Alliance*, 2017.
[359] Save the Children, *Immunizations and Measles*, 2017.
[360] Ibid.
[361] WHO, *World Health Statistics 2016: Monitoring the health for the SDGS*, 2016, p. 15.
[362] Ibid.
[363] Ibid.; WHO, *The World Health Report 2013*, 2013.
[364] WHO, *Immunization and Vaccination Development*, 2009.
[365] WHO, *Global Immunization Impact Constrained by Outdated Vaccine Delivery Systems, Researchers Say*, 2017.
[366] WHO, *World Health Statistics 2016: Monitoring the health for the SDGS*, 2016, p. 26.
[367] Ibid.
[368] Ibid.; WHO, *The World Health Report 2013*, 2013.
[369] UN DPI, *Health services, especially vaccines, must 'reach the unreached,' stress UN agencies*, 2017.
[370] WHO, *World Immunization Week, 24-30 April 2017*, 2017.
[371] WHO, *Global Vaccine Safety*, 2017.
[372] WHO, *Infographics: #vaccineswork*, 2017.

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.[373]

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.[374] As infection rates for vaccine-preventable diseases drop, some believe that vaccines are no longer necessary.[375] In other regions, such as Southeast Asia and Africa, lack of vaccination is often due to the belief that vaccines are not effective.[376] 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.[377] 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.[378] This scandal was detrimental to promotion of vaccines as it solidified parents' concerns about vaccines' safety.[379] 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.[380]

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.[381] WHO's Vaccine Safety Net (VSN) regularly addresses concerns and myths fueling vaccine hesitancy and provides accurate data.[382] VSN began in 2003, and is a global network of websites that have only factual data and statistics regarding vaccines.[383] WHO estimates that more than 173 million users access the VSN network every month.[384] 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.[385]

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.[386] A significant number of global illnesses and deaths occur from communicable diseases that lack a vaccine, including HIV, tuberculosis, dengue, and malaria.[387] WHO's IRV supports vaccine development by establishing standards and guidelines for research, identifying research priorities, and strengthening capacity.[388] Because vaccine research is conducted by scientists and institutions across multiple countries, IVR'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.[389] Additionally, IVR 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

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[373] Ibid.

[374] WHO, *Check the source: WHO-validated websites provide trustworthy information on vaccine safety*, 2017.

[375] Ibid.

[376] Larson et al., *The State of Vaccine Confidence 2016: Global Insights Through a 67-Country Survey*, 2016.

[377] Ibid.

[378] *A Vaccine Scandal in China causes Outcry*, The Economist, 2016.

[379] Ibid.

[380] Ibid.

[381] WHO, *Six common misconceptions about immunizations*, 2017.

[382] WHO, *Check the source: WHO-validated websites provide trustworthy information on vaccine safety*, 2017; WHO, *Vaccine Safety Net*, 2017.

[383] Ibid.

[384] Ibid.

[385] WHO, *Check the source: WHO-validated websites provide trustworthy information on vaccine safety*, 2017.

[386] WHO, *Research and Development*, 2017.

[387] WHO, *WHO-UNAIDS HIV Vaccine Initiative: Mission and activities*, 2017; WHO, *Dengue vaccine research*, 2017; WHO, *Malaria vaccines*, 2017; WHO, *Tuberculosis vaccine development*, 2017.

[388] WHO, *Disease-specific areas of work*, 2017.

[389] Ibid.

most in need.[390] 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.[391] Collectively, the IVR activities support and promote ongoing vaccine research happening all over the world.[392]

WHO places particular emphasis on the development of a vaccine for HIV to reduce deaths from AIDS.[393] 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.[394] 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."[395] 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.[396] 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.[397] 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.[398] 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.[399] The research is co-funded by NIAID, the Bill & Melinda Gates Foundation, and the South African Medical Research Council.[400] The International AIDS Vaccine Initiative has estimated that the deployment of a successful vaccine could reduce annual infections by 78-85% by 2070.[401] The work of WHO, UNAIDS, and the various research institutions on an HIV vaccine has the potential to save millions of lives.[402]

Conclusion

Public health is essential to creating a sustainable future for next generations.[403] Vaccines are a vital component of primary health care and have been proven to prevent at least 2 to 3 million deaths annually.[404] 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.[405] However the price and challenges with personnel, infrastructure, and education continue to prevent universal access to vaccines.[406] 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.[407] It is also important that proper education be provided to restore confidence in vaccination.[408] Additionally, the impact of vaccines on public health can be greatly expanded through the development of new vaccines, especially a vaccine for HIV.[409] As a leading international agency for public health, WHO continues to be a leader on this issue.[410]

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[390] Ibid.
[391] Ibid.
[392] WHO, *Research and Development*, 2017.
[393] WHO, *WHO-UNAIDS HIV Vaccine Initiative: Mission and activities*, 2017.
[394] Ibid.
[395] Ibid.
[396] Ibid.; WHO, *WHO-UNAIDS HIV Vaccine Initiative: Advocacy and policy*, 2017.
[397] Ibid.
[398] NIAID, *History of HIV Vaccine Research*, 2017.
[399] NIAID, *First New HIV Vaccine Efficacy Study in Seven Years Has Begun, 2016*.
[400] Ibid.
[401] International AIDS Vaccine Initiative, *The Potential Health Impact and Cost-Effectiveness of an AIDS Vaccine*, 2016.
[402] Ibid.
[403] WHO, *Immunizations*, 2017.
[404] Ibid.
[405] WHO, *Immunization Coverage*, 2017.
[406] WHO *World Health Statistics 2016: Monitoring the health for the SDGS*, 2016, p. 38.
[407] Ibid., p. 39.
[408] WHO, *Immunization Coverage*, 2017.
[409] WHO, *WHO-UNAIDS HIV Vaccine Initiative: Mission and activities*, 2017.
[410] WHO, *Immunization Coverage*, 2017.

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?

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> *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.

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