NMUN•NY

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World Health Organization
Background Guide 2019

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NATIONAL MODEL UNITED NATIONS

Dear Delegates,

Welcome to the 2019 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: Directors Kiki Tamis (Conference A) and Marielisa Figueroa Saggese (Conference B). Kiki Tamis is a 23-year old student from Nijmegen, the Netherlands. She is currently pursuing her BA at Teachers College for Primary Schools, after having studied International and European Law. Marielisa is from Venezuela and received her BA in International Relations and Latin American Studies with minors in Political Economy and Portuguese at the University of Texas at Austin in 2018. She currently works at UT-Austin as an Administrative Assistant while preparing for graduate school.

The topics under discussion for the World Health Organization are:

1. Antibiotic Resistance as a Threat to Global Health
2. Addressing Mental Health in Protracted Humanitarian Crises
3. Strengthening Global Resilience against Outbreaks and Epidemics

WHO 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•NY 2019, 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 2019 in accordance with the guidelines in the *NMUN Position Paper Guide*.

Two resources, available 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, Collin King (Conference A) and Martina Vetrovcova (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!
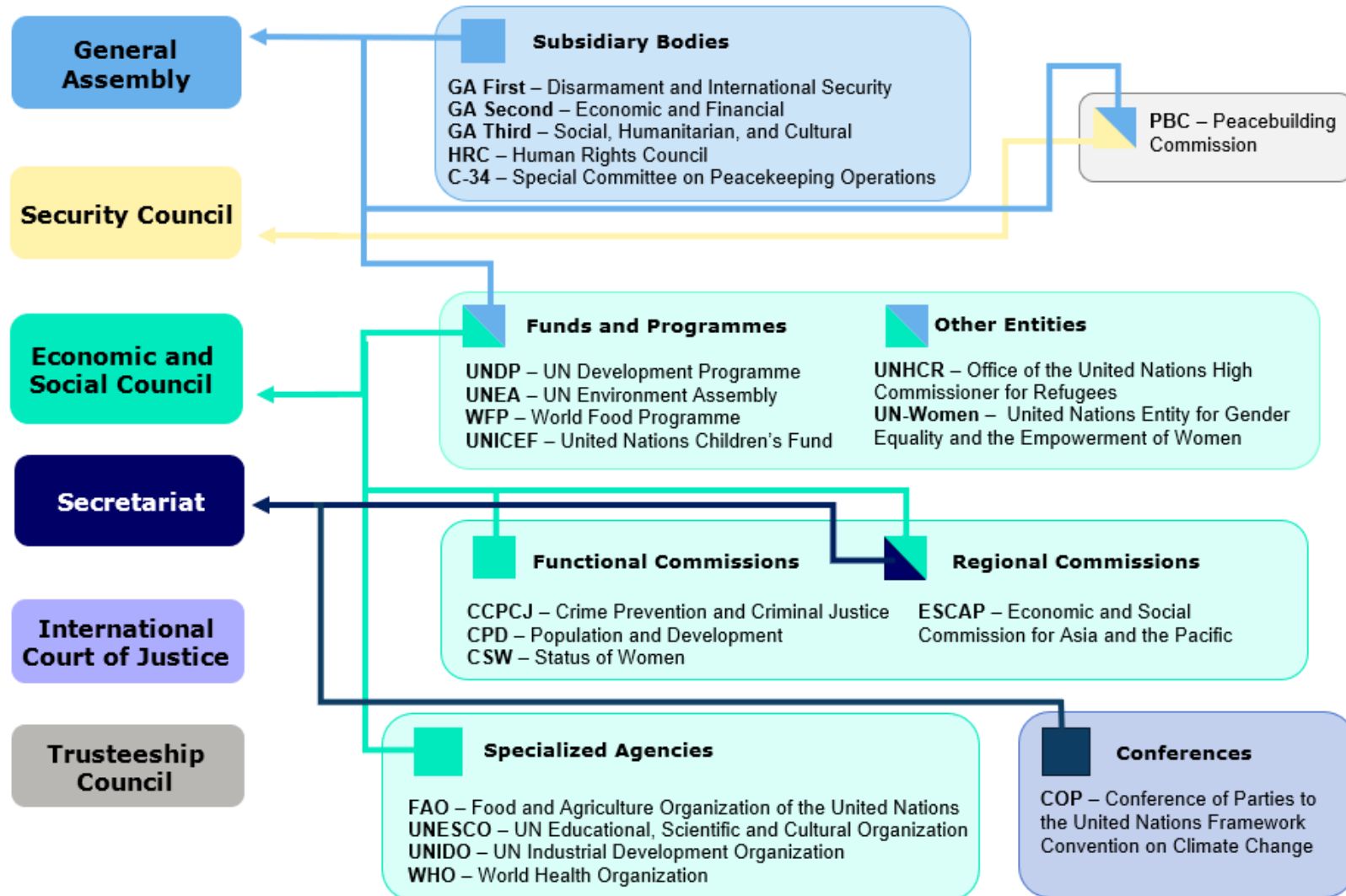
Conference A	Conference B
Kiki Tamis, Director	Marielisa Figueroa Saggese, Director

Table of Contents

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
HRC – Human Rights Council
C-34 – Special Committee on Peacekeeping Operations

PBC – Peacebuilding Commission

Funds and Programmes

UNDP – UN Development Programme
UNEA – UN Environment Assembly
WFP – World Food Programme
UNICEF – United Nations Children's Fund

Other Entities

UNHCR – Office of the United Nations High Commissioner for Refugees
UN-Women – United Nations Entity for Gender Equality and the Empowerment of Women

Functional Commissions

CCPCJ – Crime Prevention and Criminal Justice
CPD – Population and Development
CSW – Status of Women

Regional Commissions

ESCAP – Economic and Social Commission for Asia and the Pacific

Specialized Agencies

FAO – Food and Agriculture Organization of the United Nations
UNESCO – UN Educational, Scientific and Cultural Organization
UNIDO – UN Industrial Development Organization
WHO – World Health Organization

Conferences

COP – Conference of Parties to the United Nations Framework Convention on Climate Change

Committee Overview

Introduction

The World Health Organization (WHO) is the directing and coordinating authority on international health-care issues within the United Nations (UN) system, promoting the attainment of the highest possible level of health by all people.[1] WHO intervenes within six intersecting areas of work to assist its 194 Member States in the development of their respective health systems; the eradication of non-communicable diseases (NCDs); the promotion of good lifelong health; the prevention, treatment, and care of communicable diseases; the preparedness, surveillance, and response with respect to international health emergencies; and the extension of corporate services to the organization's public and private partners.[2]

> At NMUN•NY 2019, 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 NMUN•NY 2019, and corresponding with the educational mission of the conference, the committee has the ability to make programmatic and policy decisions on issues within the mandate of WHO in line with the overall function of the organization.

WHO is guided by the principle that health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.[3] Outlined in the *Constitution of the World Health Organization* (1946), this principle was adopted in July 1946 by the then 51 UN Member States and 10 additional states.[4] After a complete breakdown of international health cooperation during World War II, an Interim Commission continued the activities of existing health institutions such as the Health Organisation of the League of Nations.[5] Following a proposal by various Member States during the San Francisco conference that set the foundation for the UN in April 1945, the creation of an international health organization was signed by 61 members, however, its constitution only came into force when 26 of those Member States ratified it in 1946.[6] After entering into force in April 1948, the World Health Assembly (WHA), the organization's decision-making body comprised of all WHO Member States, convened in Geneva on 24 June 1948 for the first time.[7] Although WHO had largely remained a driving force for health research throughout its first decade, its operative programs gradually expanded in the following years.[8] The adoption of a resolution by WHA on a "Smallpox Eradication Programme" marks the organization's first global immunization campaign, which eventually succeeded in eliminating the disease in 1980.[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]

Governance, Structure, and Membership

WHO's membership is comprised of 195 Member States, all of whom are UN Member States except for the Cook Islands and Nieu.[11] While WHO Secretariat's headquarters is located in Geneva, Switzerland, the organization maintains a worldwide presence, staffing six regional offices across the globe and

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[1] WHO, *About WHO*, 2018; WHO, *Basic Documents: 48th ed. Including amendments adopted up to 31 December 2014*, 2014.
[2] WHO, *What we do*, 2018.
[3] WHO, *Constitution of WHO: principles*, 2018.
[4] Ibid.
[5] Ibid.
[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, *Countries,* 2018.

operating a total of 150 country offices and decentralized 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 WHO Member State elected by WHA with respect to population per region proportions.[13] The Board's key policymaking functions include the drafting of multiannual programs of work as well as submitting draft resolutions to WHA for consideration.[14] In formulating WHO policies, the Executive Board's Programme, Budget and Administration Committee (PBAC) plays an important role, as it makes recommendations with regard to planning, monitoring, and evaluation of WHO programs, and the organization's financial and administrative management.[15] The PBAC consists of 14 board members, with two members from each region elected by the Executive Board for a two-year period.[16] Furthermore, the Executive Board endorses decisions and policies of WHA and coordinates response efforts to international health emergencies.[17] The Executive Board meets at least twice a year, once in January and once in May after the WHA's annual convention.[18] The Board also holds special sessions in the event of an international health emergency or issue of international importance, most recently in an effort to work on the draft *Thirteenth General Programme of Work 2019−2023* (2018).[19]

In addition to the determination of WHO's policies, the Assembly supervises the organization's financial policies, adopts its budget, and appoints the Director-General on the nomination of the Executive Board.[20] WHO's Director-General acts as chief technical and administrative officer with the support of the secretariat's administrative staff.[21] The Director-General also serves as the ex officio secretary of WHA, the Executive Board, as well as the organization's commissions and committees, and is responsible for submitting WHO's financial statements and budget estimates to the Executive Board.[22] Dr. Terdros Adhanom Ghebreyesus is the current Director-General of WHO, succeeding Dr. Margaret Chan who had held the position during the previous 10 years.[23] Before the end of her term as WHO's Director-General, Dr. Chan published a report titled *Ten years in public health 2007-2017*, which addresses the setbacks, achievements, and progress during her time in office.[24] The current Director-General's vision reinforces the importance of Sustainable Development Goals (SDGs) in improving global health and well-being by focusing on health rights for all people and by giving health the central role in international agendas.[25]

WHO's biennial program budgets derive from its multiannual programs of work, and are funded through a combination of assessed and voluntary contributions.[26] Assessed contributions are those coming from dues paid by Member States in order to keep their membership status.[27] Voluntary contributions are made by state and non-state contributors, such as non-governmental organizations (NGOs), private sector, philanthropic foundations, and academic institutions.[28] Historically, most of WHO's funding has been constituted by assessed contributions, but since 1990 voluntary contributions have increased and now represent the majority of the income.[29] For the 2018-1019 biennial program, the Director-General proposed a 3% increase in assessed contributions to achieve complete funding of the program budget.[30]

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[12] WHO, *WHO Presence in Countries, Territories and Areas: 2015 Report*, 2015.
[13] WHO, *The Executive Board*, 2018.
[14] WHO, *Constitution of the World Health Organization*, 1946, p. 9; WHO, *Governance*, 2018.
[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] Ibid.
[19] WHO, *Draft Thirteenth General Programme of Work 2019-2023 (A71/4)*, 2018; WHO, *The Executive Board*, 2018.
[20] WHO, *Constitution of the World Health Organization*, 1946, p. 6.
[21] Ibid., 1946, p. 9.
[22] WHO, *Constitution of the World Health Organization*, 1946, pp. 9-10.
[23] WHO, *Dr. Tedros takes office as WHO Director-General*, 2017.
[24] WHO, *Ten years in public health 2007-2017*, 2017.
[25] WHO, *Vision statement by WHO Director-General*, 2018.
[26] WHO, *Funding WHO*, 2018; WHO, *Planning, finance and accountability*, 2018.
[27] WHO, *Assessed contributions*, 2018.
[28] WHO, *Programme Budget 2018-2019*, 2018.
[29] Ibid.
[30] Ibid.

In May 2011, the Executive Board launched a Member State-led reform to transform WHO into a more effective and efficient, transparent, and accountable organization.[31] The reform addresses three core areas – programs and priority setting, governance, and management – and tackles a wide range of issues relating to accountability, human resources, evaluation, and communication.[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] In terms of the financial reform, the Programme Budget 2018-2019 replaces preapproved funding for crisis response with planning and budgeting at the time of emergency, and adjusts resource allocation for areas that attract less donor interest.[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* (1945).[35] Notwithstanding its status as an autonomous organization within the UN system, WHO operates within the purview of the UN 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 Executive Board for Coordination, which comprises the 29 executive heads of the UN including its funds and programs, the specialized agencies, and subsidiary bodies.[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, as well as improving nutrition, sanitation, and other conditions.[41] WHO is also responsible for advancing medical and health-related research; promoting scientific collaboration; improving standards of training in health, medical, and related professions; as well as developing international standards for food, biological, pharmaceutical, and similar products.[42]

WHO carries out various projects, campaigns, and partnerships, addressing a wide range of health topics.[43] Furthermore, WHO's programs may operate on global, regional, and country levels simultaneously.[44] 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.[45] WHO's activities during outbreaks are also often complemented by the work of the Global Outbreak Alert and Response Network, a coalition of Member States' scientific institutions, medical and surveillance initiatives, regional technical networks, the United

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[31] WHO, *WHO reform: overview of reform implementation*, 2015.
[32] Ibid.
[33] Ibid.
[34] WHO, *Proposed Programme Budget 2018-2019*, 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] UN CEB, *Who we are*, 2015.
[39] Ibid.
[40] WHO, *Constitution of the World Health Organization*, 1946, pp. 2-3.
[41] Ibid., p. 2.
[42] Ibid., p. 3.
[43] WHO, *Health topics*, 2018.
[44] WHO, *Ebola Response in Action*, 2015; WHO, *Partners: Global Outbreak Alert and Response Network (GOARN)*, 2018.
[45] WHO, *Questions and answers about WHO's role in Humanitarian Health Action*, 2018.

Nations Children's Fund (UNICEF), the Office of the United Nations High Commissioner for Refugees (UNHCR), the Red Cross, and other humanitarian NGOs.[46]

WHO also assumes a norm- and standard-setting function to help states prevent the outbreaks of public health issues, most notably via promoting the implementation of the *International Health Regulations* (IHR), which were adopted by WHA resolution 58.3 "Revision of the International Health Regulations" on 23 May 2005.[47] The need for strengthening states' diseases surveillance capacities has become salient following a resurgence of several epidemic diseases in the 1990s such as cholera and plague.[48] The IHR legally binds 196 states, including all WHO Member States, setting standards for the prevention and response to acute, cross-border public health risks.[49]

The promotion of health-related research plays a central role in advancing global health and provides benefits across WHO's work areas.[50] 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.[51] Another key contribution by WHO is the systematic collection, analysis, and interpretation of health-related data via the organization's Global Health Observatory Data Repository and its annual *World Health Statistics Reports*.[52]

In order to promote international health, WHO partners with other UN bodies such as the Joint United Nations Programme on HIV/AIDS (UNAIDS), as well as external public entities, NGOs, and private sector actors.[53] Most notably, WHO leads the Global Health Cluster (GHC), which comprises 48 partners, including UN bodies as well as public stakeholders and academic institutions.[54] Aiming to minimize the health impacts of humanitarian emergencies, GHC partners collaborate to foster global capacities for emergency preparedness, response, and recovery from humanitarian health crises.[55] 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.[56]

Recent Sessions and Current Priorities

The 142nd Executive Board meeting in January 2018 included conversations on WHO's public health preparedness and response; polio transition planning; and the relationship between health, environment and climate change.[57] At the UN Climate Change Conference (COP 23) hosted in Bonn, Germany in November 2017, WHO partnered with the Secretariat of the *United Nations Framework Convention on Climate Change* (UNFCCC) (1992) to introduce a special initiative that raises awareness about the health impacts of climate change, especially on those living in Small Islands Developing States (SIDS).[58] As a result of this initiative, in March 2018, WHO co-hosted with the governments of Fiji, Mauritius, and

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[46] WHO, *Ebola Response in Action*, 2015; WHO, *Partners: Global Outbreak Alert and Response Network (GOARN)*, 2018.
[47] WHO, *Frequently asked questions about the International Health Regulations (2005)*, 2018; WHO, *International Health Regulations (IHR)*, 2018.
[48] WHO, *Frequently asked questions about the International Health Regulations (2005)*, 2018.
[49] WHO, *Frequently asked questions about the International Health Regulations (2005)*, 2018; WHO, *International Health Regulations (IHR)*, 2018.
[50] WHO, *The WHO strategy on research for health*, 2012, p. 8.
[51] 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.
[52] WHO, *Global Health Observatory data repository*, 2015; WHO, *World Health Statistics 2018*, 2018.
[53] WHO, *Partnerships*, 2018.
[54] WHO, *About the Global Health Cluster*, 2015; WHO, *Global Health Cluster Partners*, 2015.
[55] WHO, *The strategic framework of the Global Health Cluster*, 2018.
[56] WHO, *Partnerships*, 2018.
[57] WHO, *Agenda (EB142/1 Rev.1)*, 2018.
[58] UNFCCC, *Launch of special initiative to address climate change impact on health in Small Island Developing States*, 2017.

Grenada the Third Global Conference on Climate and Health to accelerate health efforts in SIDS, who are especially vulnerable to climate change impacts.[59]

At the seventy-first session of the WHA in May 2018, the Assembly adopted resolutions that reaffirm the organization's commitment to the SDGs, especially SDG 3, which stresses the importance of good health and well-being.[60] Furthermore, during the same session, the WHA adopted the *Thirteenth General Programme of Work 2019-2023*, which defines the organization's current priorities.[61] According to this document, WHO's work will focus on promoting IHR's implementation, improving access to medical products, furthering action on social determinants of health, advancing universal health coverage, addressing the challenge of NCDs, and shaping WHO's role in achieving the SDGs.[62] The 143rd Executive Board meeting that same month discussed, among other things, the evaluation of WHO-hosted partnerships, the progress in international classification of diseases, and the WHO governance reform.[63]

During the last year, WHO has been in the frontline of addressing and providing aid in different areas to assist Member States affected by dozens of disease outbreaks and other pressing international crises that have taken place all around the world.[64] Diseases that had been nearly eradicated and could be preventable through vaccines, such as diphtheria and cholera, have made a comeback and threaten the lives of millions of people around the globe, especially those in vulnerable communities.[65] Another serious challenge faced by the international community and WHO has been the outbreak of the Ebola virus disease in the Democratic Republic of the Congo with 73 total cases and approximately 43 deaths as of August 2018.[66] Malnutrition, natural hazards, and access to health in situations of conflict are other threats to global health that have predominated recently.[67] As outbreaks and epidemics keep occurring all over the world, WHO continues working to keep the world safe from health threats, especially those who are most vulnerable.[68]

Conclusion

WHO is the coordinating authority on international health-care issues within the UN system.[69] As the executive body responsible for the formulation and review of WHO's policies, the Executive Board assumes a key responsibility in addressing current health priorities through the preparation of draft resolutions considered by WHA.[70] The global state of health is ever-changing and increasingly complicated, requiring strategic, creative, and unique solutions that adapt to local conditions and situations.[71] 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.[72]

Annotated Bibliography

[59] WHO, *Third Global Conference on Climate and Health*, 2018.
[60] WHO, *Agenda (71/1 Rev.2)*, 2018.
[61] WHO, *Thirteenth General Programme of Work (WHA 71.1)*, 2018.
[62] WHO, *Leadership priorities*, 2018.
[63] WHO, *Agenda (EB143/1 Rev.1)*, 2018.
[64] WHO, *Outbreaks: Behind the headlines*, 2018.
[65] Ibid.
[66] WHO, *Ebola situation reports: Democratic Republic of the Congo*, 2018.
[67] WHO, 10 threats to global health in 2018, *Medium*, 2018.
[68] WHO, *Managing epidemics: key facts about major deadly diseases*, 2018.
[69] WHO, *About WHO*, 2018.
[70] WHO, *The Executive Board,* 2018; WHO, *World Health Assembly*, 2018.
[71] WHO, *10 facts on the state of global health*, 2018.
[72] WHO, *WHO Director-General*, 2018.

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

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

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

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

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

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

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

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

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

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

Bibliography

Charter of the United Nations. (1945). Retrieved 4 September 2018 from: http://www.un.org/en/charter-united-nations/index.html

United Nations System Chief Executives Board for Coordination. (2016). *Who we are* [Website]. Retrieved 4 September 2018 from: http://www.unsceb.org/content/who-we-are

World Health Organization, First assembly. (1946). *Constitution of the World Health Organization*. Retrieved 4 September 2018 from: https://archive.org/details/WHO-constitution/page/n19

World Health Organization. (2005). *International Health Regulations*. Second Edition. Retrieved 4 September 2018 from: http://apps.who.int/iris/bitstream/handle/10665/43883/9789241580410_eng.pdf

World Health Organization. (2008). *The Third Ten Years of the World Health Organization – 1968-1977* [Book]. Retrieved 4 September 2018 from: http://apps.who.int/iris/bitstream/handle/10665/43924/9789241563666_eng.pdf

World Health Organization. (2012). *The WHO strategy on research for health*. Retrieved 4 September 2018 from: http://apps.who.int/iris/bitstream/handle/10665/77935/9789241503259_eng.pdf

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

World Health Organization. (2015). *Frequently asked questions about the International Health Regulations (2005)* [Information Sheet]. Retrieved 4 September 2018 from: http://www.who.int/ihr/about/FAQ2009.pdf

World Health Organization. (2015). *WHO Presence in Countries, Territories and Areas 2015 Report*. Retrieved 4 September 2018 from: http://apps.who.int/iris/bitstream/handle/10665/171388/WHO_Presence_Report_2015.pdf

World Health Organization. (2016). *Ebola Response in Action* [Website]. Retrieved 4 September 2018 from: http://apps.who.int/ebola/our-work/achievements

World Health Organization. (2016). *Global Health Observatory Data Repository* [Website]. Retrieved 18 August 2018 from: http://apps.who.int/gho/data/?theme=main

World Health Organization. (2016). *WHO's financing dialogue 2016* [Website]. Retrieved 4 September 2018 from: http://www.who.int/about/finances-accountability/funding/financing-dialogue/en/

World Health Organization. (2017). *10 facts on the state of global health* [Website]. Retrieved 4 September 2018 from: http://www.who.int/features/factfiles/global_burden/en/

World Health Organization. (2017, July 1). *Dr. Tedros takes office as WHO Director-General* [News Article]. Retrieved 4 September 2018 from: http://www.who.int/en/news-room/detail/01-07-2017-dr-tedros-takes-office-as-who-director-general

World Health Organization (2017). *Programme Budget 2018-2019* [Report]. Retrieved 4 September 2018 from: http://www.who.int/about/finances-accountability/budget/PB2018-2019_en_web.pdf?ua=1

World Health Organization. (2017). Proposed Programme Budget 2018-2019 [Report]. Retrieved 4 September 2018 from: http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_7-en.pdf

World Health Organization. (2017). *Ten years in public health 2007-2017: report by Dr. Margaret Chan, Director General, World Health Organization*. Retrieved 10 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/255355/9789241512442-eng.pdf

World Health Organization (2018). *Assessed contributions* [Website]. Retrieved 4 September 2018 from: http://www.who.int/about/finances-accountability/funding/assessed-contributions/en/

World Health Organization. (2018). *About the Global Health Cluster* [Website]. Retrieved 7 August 2018 from: http://www.who.int/health-cluster/about/en/

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

World Health Organization. (2018). *Constitution of WHO: principles* [Website]. Retrieved 7 July 2018 from: http://who.int/about/mission/en/

World Health Organization (2018). *Countries* [Website]. Retrieved 4 September 2018 from: http://www.who.int/countries/en/

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

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

World Health Organization. (2018). *Ebola situation reports: Democratic Republic of the Congo* [Website]. Retrieved 15 August 2018 from: http://www.who.int/ebola/situation-reports/drc-2018/en/

World Health Organization. (2018). *The Executive Board* [Website]. Retrieved 7 August 2018 from: http://www.who.int/governance/eb/en/

World Health Organization. (2018). *Funding WHO* [Website]. Retrieved 7 July 2018 from: http://www.who.int/about/finances-accountability/funding/en/

World Health Organization. (2018). *Global Health Cluster Partners* [Website]. Retrieved 7 August 2018 from: http://www.who.int/health-cluster/partners/en/

World Health Organization. (2018). *Global Health Cluster Strategy Framework 2017-2019*. Retrieved 7 August 2018 from: http://www.who.int/health-cluster/about/work/strategic-framework/GHC-strategy-2017-2019.pdf

World Health Organization. (2018). *Governance* [Website]. Retrieved 7 July 2018 from: http://www.who.int/governance/en/

World Health Organization. (2018). *Health topics* [Website]. Retrieved 7 July 2018 from: http://www.who.int/topics/en/

World Health Organization. (2018). *International Health Regulations (IHR)* [Website]. Retrieved 7 August 2018 from: http://www.who.int/topics/international_health_regulations/en/

World Health Organization. (2018). *Leadership priorities* [Website]. Retrieved 7 August 2018 from: http://www.who.int/dg/priorities/en/

World Health Organization. (2018). *Managing epidemics: key facts about major deadly diseases* [Manual]. Retrieved 1 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/272442/9789241565530-eng.pdf

World Health Organization (2018). *Origin and development of health cooperation* [Website]. Retrieved 7 August 2018 from: http://www.who.int/global_health_histories/background/en/

World Health Organization. (2018, August 15). *Outbreaks: Behind the headlines* [News Article]. Retrieved 15 August 2018 from: http://www.who.int/emergencies/outbreaks-behind-the-headlines

World Health Organization. (2018). *Partners: Global Outbreak Alert and Response Network (GOARN)* [Website]. Retrieved 7 August 2018 from: http://www.who.int/csr/disease/ebola/partners/en/

World Health Organization. (2018). *Partnerships* [Website]. Retrieved 7 August 2018 from: http://www.who.int/about/collaborations/partnerships/en/

World Health Organization. (2018). *Planning, finance and accountability* [Website]. 7 August 2018 from: http://www.who.int/about/finances-accountability/en/

World Health Organization. (2018). *Public Health Surveillance* [Website]. Retrieved 7 August 2018 from: http://www.who.int/topics/public_health_surveillance/en/

World Health Organization. (2018). *Questions and answers about WHO's role in Humanitarian Health Action* [Website]. Retrieved 7 August 2018 from: http://www.who.int/hac/about/faqs/en/

World Health Organization. (2018, February 9). 10 threats to global health in 2018 [Blog Post]. *Medium.* Retrieved 16 August 2018 from: https://medium.com/@who/10-threats-to-global-health-in-2018-232daf0bbef3

World Health Organization. (2018). *Vision Statement by WHO Director-General* [Website]. Retrieved 7 August 2018 from: http://www.who.int/dg/vision/en/

World Health Organization. (2018). *What we do* [Website]. Retrieved 7 August 2018 from: http://www.who.int/about/what-we-do/en/

World Health Organization. (2018). *WHO Director-General* [Website]. Retrieved 7 August 2018 from: http://www.who.int/dg/en/

World Health Organization. (2018). *World Health Statistics 2018* [Report]. Retrieved 12 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/272596/9789241565585-eng.pdf

World Health Organization, Executive Board, 131st session. (2012). *Revised terms of reference for the Programme, Budget and Administration Committee of the Executive Board (EB131.R2)* [Decision]. Retrieved 4 September 2018 from: http://apps.who.int/gb/ebwha/pdf_files/EB131/B131_R2-en.pdf

World Health Organization, World Health Assembly, Sixty-third session. (2010). *Sixty-Third World Health Assembly. Resolutions and Decisions. Annexes (WHA63/2010/REC/1)*. Retrieved 4 September 2018 from: http://apps.who.int/gb/ebwha/pdf_files/WHA63-REC1/WHA63_REC1-en.pdf

World Health Organization, World Health Assembly, Sixty-eighth session. (2015). *WHO reform: overview of reform implementation. Report by the Director-General (A68/4)*. Retrieved 4 September 2018 from: http://apps.who.int/gb/ebwha/pdf_files/WHA68/A68_4-en.pdf

I. Antibiotic Resistance as a Threat to Global Health

Introduction

Antibiotic medication is responsible for the great improvement in public health since the discovery of penicillin, but the rise of antibiotic resistance is limiting antibiotic efficacy and giving rise to new health threats.[73] Antibiotic resistance is a form of antimicrobial resistance (AMR).[74] Antibiotics are made to penetrate the cell wall of a bacteria, and neutralize the cell from within.[75] Bacteria can become resistant to the effects of antibiotics meaning that the bacteria is no longer neutralized or destroyed when exposed to antibiotic treatment.[76] When certain strains of bacteria no longer respond to certain types of antibiotics, infections in humans and animals can persist, worsen, and spread.[77] Some bacteria that have shown resistance to common antibiotics include streptococcus pneumoniae, salmonella, E.coli, shigella and salmonella.[78]

Causes of antibiotic-resistant bacterial strains include: the overuse and over-prescribing of antibiotics, unnecessary use of antibiotics in agriculture, poor infection control in hospitals and clinics, lack of rapid laboratory tests to create new antibiotics, lack of awareness by the public about resistance in bacteria, and poor hygiene and sanitation practices.[79] It is difficult to quantify the full impact of antibiotic resistance on public health; in the European Union (EU) alone, more that 25,000 deaths and 2.5 million extra days of hospital care are the direct result of increased antibiotic resistance.[80] Antibiotic resistance is responsible for more than 23,000 deaths and over 2 million illnesses per year in the United States.[81] In India, infant death due to resistant bacteria passed on by the mother has risen to a number of 58,000 deaths.[82] Bacterial resistance to antibiotics continues to evolve very rapidly, quickly becoming a serious threat to global health.[83]

Antibiotic-resistant bacteria can spread in various ways including: through direct contact between humans and animals or in the consumption of food, for instance when humans consume animals or crops that have been treated with antibiotics antimicrobials.[84] Therefore, cooperation between the Food and Agriculture Organization of the United Nations (FAO), the Organization for Animal Health (OIE) and the World Health Organization (WHO) is essential to combat antimicrobial and antibiotic resistance.[85] Urgent action with a cross-sectoral approach is required to effectively stop the spread of this global health threat.[86]

International and Regional Framework

Antibiotic resistance not only presents a threat to global health, it also threatens the objectives set out in the *Constitution of the World Health Organization* (1946).[87] Economic status and social status contributes to the availability of antibiotics, which is contrary to the WHO objective that everyone should have the best possible health care, regardless of race, religion, social, or economic status.[88] The active co-operation and support of the public is extremely important in the improvement of health, which is also

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[73] WHO, *Antibiotic resistance – a threat to global health security*, 2013.
[74] Ibid.
[75] WHO, *Global antimicrobial resistance surveillance system (GLASS) report: early implementation 2016-2017*, 2017.
[76] Ibid.
[77] United States of America, *Antibiotic Resistance Questions and Answers*, 2018.
[78] WHO, *Global antimicrobial resistance surveillance system (GLASS) report: early implementation 2016-2017*, 2017.
[79] Ibid.
[80] United States of America, *Infographic: Antibiotic Resistance The Global Threat*, 2017.
[81] Ibid.
[82] Ibid.
[83] WHO, *Antibiotic resistance – a threat to global health security*, 2013.
[84] FAO, *The FAO Action Plan on Antimicrobial Resistance 2016-2020*, 2016, pp. 0-4.
[85] Ibid.
[86] WHO, *Antibiotic resistance – a threat to global health security*, 2013.
[87] WHO, *Constitution of the World Health Organization*, 1946.
[88] Ibid.

applicable to antibiotic resistance.[89] In 2009, the WHA issued a progress report on the rational use of medicines, highlighting the importance of education and awareness.[90] *Transforming our world: the 2030 Agenda for Sustainable Development,* adopted by the General Assembly on 25 September 2015, strives toward sustainable development, also aiming to ensure healthy lives and promote well-being for all at all ages through Sustainable Development Goal (SDG) 3.[91] SDG 3.3 aims to "by 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases."[92] Many of these diseases, including tuberculosis and many sexually-transmitted infections are becoming drug resistant; therefore, the proper treatment and management of these infections, as highlighted by SDG 3 would help mitigate growing antibiotic resistance and the spread of these specific strains.[93] SDG 3 also recognizes the need to provide universal health coverage to all people, which would facilitate the safe and responsible use of antibiotics.[94]

In 1998, the World Health Assembly (WHA) adopted their first resolution on the dangers of antibiotic resistance, expressing their concern about the rapid emergence and spread of antibiotic resistance, as well as their deep concerns about the extensive use of antibiotics in food production, seeing as these uses may accelerate the spread of antibiotic resistance.[95] In 2014, WHO issued resolution WHA67.25 on AMR, in which the WHA urged Member States to take action to slow the spread of AMR by educating professionals and the public on appropriate use of antibiotics; improving their methods for preventing infections; strengthening legislation to prevent any buying and selling of counterfeit antimicrobial agents; and taking measures against the use of antibiotics in food-animal production.[96]

Other important resolutions issued by the WHA are WHA58.27 of 2005 on "Improving the containment of antimicrobial resistance," and WHA A68/20 of 2015, "Draft global action plan on antimicrobial resistance."[97] In May 2015, the WHA adopted the *Global Action Plan on Antimicrobial Resistance* in resolution WHA68.7.[98] The goal of this action plan is to ensure the responsible use of medication, open accessibility of treatment, the recognition and encouragement of successful treatment, and the prevention of the spread of infectious diseases.[99] There are five primary objectives, including: improving awareness; strengthening knowledge through research and surveillance; reducing infection risk; optimizing the use of antimicrobial agents; and ensuring continued investment in combating AMR.[100] The goals set out in the Global Action Plan were developed with broad input and they identify specific and clear actions to be taken by Member States, the WHO Secretariat, and international partners of WHO in multiple sectors.[101]

The *FAO Action Plan on Antimicrobial Resistance (2016-2020)*, adopted in 2016 is designed to help entities implement the *Global Action Plan on Antimicrobial Resistance* by minimizing the use of antimicrobials and antibiotics in the food and agricultural sectors.[102] The FAO views the inappropriate and excessive use of antimicrobials and antibiotics, as well as a lack of regulation, as the primary cause for

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[89] Ibid.
[90] WHO, *Progress reports on technical and health matters (WHA62/23)*, 2009.
[91] UN General Assembly, *Transforming Our World: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[92] Ibid.
[93] UN General Assembly, *Transforming Our World: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015; WHO, *Antimicrobial Resistance*, 2018.
[94] UN General Assembly, *Transforming Our World: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[95] WHO, *Emerging and other communicable diseases: antimicrobial resistance (WHA51.17)*, 1998.
[96] WHO, *Antimicrobial resistance (WHA67.25)*, 2014.
[97] WHO, *Improving the containment of antimicrobial resistance (WHA58.27)*, 2005; WHO, *Antimicrobial Resistance (WHA67.25)*, 2014; WHO, *Antimicrobial resistance: Draft global action plan on antimicrobial resistance (WHA68/20)*, 2015.
[98] WHO, *Global Action Plan on Antimicrobial Resistance*, 2015.
[99] Ibid.
[100] Ibid., pp. 4-11.
[101] Ibid., pp. 12-19.
[102] FAO, *The FAO Action Plan on Antimicrobial Resistance 2016-2020*, 2016.

the spread of AMR.[103] The FAO Action Plan focuses on: improving awareness, building capacity for surveillance and monitoring, strengthening governance and promoting good practices, and promoting the prudent use of antimicrobials, in order to reach the objectives set out in WHO's action plan.[104] This cooperative strategy using interrelated goals is of extreme importance to combat antibiotic resistance, seeing as antibiotic-resistant bacteria develop and move between food-producing animals, crops, and humans.[105]

Role of the International System

WHO discussed the topic of AMR and antibiotic resistance during WHA meetings in 2001, 2005, 2007, 2009, 2014 and 2015, resulting in multiple resolutions and progress reports, including WHA54.11 of 2007, which provides WHO's strategy on the safe use of medicines, including antibiotics.[106] WHO has also adopted WHA60.16 and WHA A60/28 of 2007, which provides progress reports on the rational use of medicines, which can be used as a guideline by Member States to implement their National Action Plans (NAP) and treatment guidelines.[107]

WHO has worked on the topic of antibiotic resistance for many years, including calling together a Strategic and Technical Advisory Group (STAG), that holds annual meetings; the first meeting was held in September 2013.[108] They focus on advising the Director-General on progress toward, and challenges facing the implementation of WHO's *Global Action Plan on Antimicrobial Resistance*.[109] In 2018, the STAG discussed key points such as increasing awareness and supporting behavior change, the link between AMR and the environment, Country Level NAP Implementation, and antimicrobial use in food.[110] In 2015 WHO held the first World Antibiotics Awareness Week with the aim of raising awareness on the dangers of antibiotic resistance.[111] WHO also established Collaborating Centers (CC) from 1965 onwards, creating new CCs when necessary to combat different aspects of AMR and antibiotic resistance.[112] The CCs exist worldwide and are categorized into different thematic groups, including AMR as a whole; specific organisms and diseases; antimicrobial use; infection prevention and patient safety; and, Food and animal husbandry.[113] Examples of specific centers include the WHO CC for Research and Training in Surveillance of Communicable Diseases and Antimicrobial Resistance in Sofia, Bulgaria; and, the WHO CC for Risk Assessment of Pathogens in Food and Water in Bilthoven, the Netherlands.[114]

In order to reach the objectives set out in the *Global Action Plan on Antimicrobial Resistance*, WHO also launched the Global Antimicrobial Resistance Surveillance System (GLASS) in October 2015.[115] GLASS is a database where global surveillance and research on AMR is collected.[116] GLASS was developed to "support global surveillance and research in order to strengthen the evidence base on antimicrobial resistance (AMR)."[117] It is a platform for global data sharing, with the goal to have national AMR surveillance systems in all countries; these systems would collect data on resistance in eight priority

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[103] Ibid., pp. 0-4.
[104] Ibid., pp. 1-12.
[105] FAO, *The FAO Action Plan on Antimicrobial Resistance 2016-2020*, 2016, p. 2.
[106] WHO, *WHO medicines strategy (WHA54.11)*, 2001;
[107] WHO, *Progress in the rational use of medicines (WHA60.16)*, 2007; WHO, *Progress reports on technical and health matters – Improving the containment of antimicrobial resistance (WHA60/28)*, 2007.
[108] WHO, *Strategic and Technical Advisory Group on antimicrobial resistance (STAG-AMR), Report of Ninth Meeting, 26-27 February 2018, WHO Headquarters, Geneva*, 2018.
[109] WHO, *9th Strategic and Technical Advisory Group on antimicrobial resistance (STAG-AMR) (WHO/DGO/AMR/2018.1)*, 2018.
[110] WHO, *Strategic and Technical Advisory Group on antimicrobial resistance (STAG-AMR), Report of Ninth Meeting, 26-27 February 2018, WHO Headquarters, Geneva*, 2018.
[111] WHO, *World Antibiotic Awareness Week*, 2018.
[112] WHO, *Collaborating Centers: antimicrobial resistance, antimicrobial use, and infection protection.*
[113] Ibid.
[114] Ibid.
[115] WHO, *Global Antimicrobial Resistance Surveillance System (GLASS).*
[116] Ibid.
[117] Ibid.

bacteria, detected in four specimen types and gather information on the progress a country has made in establishing national AMR surveillance systems.[118] This data collection occurs at the surveillance site such as a hospital, clinic or out-patient community health facility, is processed at a national reference laboratory, and proceeds to a national coordinating centre, such as a public health institute, which would then communicate that data to GLASS.[119] The gaps in GLASS data are largely capacity related as a many Member States deliver too little data.[120]

WHA urged all Member States to develop a NAP containing their proposals to reach the objectives set out in the *Global Action Plan on Antimicrobial Resistance* by 2017.[121] WHO, together with FAO and OIE, has written a manual for developing action plans, guided by the *Global Action Plan on Antimicrobial Resistance* and the One Health approach.[122] The One Health approach is extremely important in the combat against antibiotic resistance, as it encourages close cooperation and interrelated strategies between United Nations entities, Member States, international organizations and NGOs to tackle major health issues.[123] Many states have issued these NAPs, but their content often fails to address the causes and spread of antibiotic resistance.[124] NAP's vary from incredibly broad proposals that span a few pages, to very detailed and explicit proposals that are more than a hundred pages in length.[125]

General Assembly resolution 71/3 of 2016 on AMR established the Interagency Coordination Group (IACG) on Antimicrobial Resistance in response to reports from FAO, OIE and WHO.[126] The coordination group is an ad-hoc interagency group comprised of representatives from relevant UN bodies, international organizations and individual experts from multiple sectors that reports to the General Assembly and WHO, but also draws on expertise from relevant actors within the UN and outside.[127] They work to provide guidance for global approaches that will help to ensure sustained effective action against AMR, taking into account the Global Action Plan on Antimicrobial Resistance.[128] In IACG's proposed work plan, several objectives are set out including: coordinating the actions being taken by UN agencies and other important stakeholders; identifying, facilitating, and improving collaboration between UN and other agencies; exploring and developing global goals; and regularly reporting on progress.[129] In 2018, the IACG organized a side event during the High-Level Political Forum in New York, together with Permanent Missions of multiple countries, discussing the progress made in slowing AMR and determining the next steps.[130] Modern antimicrobials and antibiotics are used in animals, humans and the environment, which then has an effect on the entire global ecosystem.[131]

AMR in food and agriculture also has an effect on human health.[132] In order to address this, WHO works together with FAO through the Joint FAO/WHO Expert Committee on Food Additives (JECFA).[133]

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[118] WHO, *Global Antimicrobial Resistance Surveillance System*.
[119] Ibid.
[120] WHO, *Global antimicrobial resistance surveillance system (GLASS) report: early implementation 2016-2017*, 2017.
[121] WHO, *National action plans*, 2016.
[122] WHO et al., *Antimicrobial Resistance: a Manual for Developing National Action Plans*, 2016.
[123] FAO, *The FAO Action Plan on Antimicrobial Resistance 2016-2020*, 2016, p. 2.
[124] WHO, *Library of National Action Plans*, 2018.
[125] Ibid.
[126] WHO, *Strategic and Technical Advisory Group on antimicrobial resistance (STAG-AMR), Report of Ninth Meeting, 26-27 February 2018, WHO Headquarters, Geneva*, 2018; General Assembly, *Political Declaration of the high-level meeting of the General Assembly on antimicrobial resistance (A/RES/71/3)*, 2016.
[127] IACG, *Proposed work plan for the Ad-hoc Interagency Coordination Group on antimicrobial resistance*, 2017; UN General Assembly, *Political Declaration of the high-level meeting of the General Assembly on antimicrobial resistance (A/RES/71/3)*, 2016.
[128] UN General Assembly, *Political Declaration of the high-level meeting of the General Assembly on antimicrobial resistance (A/RES/71/3)*, 2016.
[129] IACG, *Proposed work plan for the Ad-hoc Interagency Coordination Group on antimicrobial resistance*, 2017.
[130] WHO, *Antimicrobial Resistance and the SDGs: challenges and opportunities*, 2018.
[131] Ibid.
[132] WHO, *Joint FAO/WHO Expert Committee on Food Additives (JECFA)*, 2018.
[133] Ibid.

According to JECFA, they: "serve as an independent scientific expert committee which performs risk assessments and provides advice to FAO, WHO, and the member countries of both organizations, as well as to the Codex Alimentarius Commission (CAC)."[134]

WHO, together with the Drugs for Neglected Diseases Initiative (DND*i*), a non-profit drug research organization, established the Global Antibiotic Research & Development Partnership (GARDP) in 2016.[135] The partnership operates under DND*i* oversight and aims to develop and deliver new treatment for bacterial infections where drug resistance occurs or is developing, or when adequate treatment is lacking.[136] They currently have programs in place to combat neonatal sepsis, and sexually transmitted diseases by optimizing treatment, education, and by establishing new treatment regimens.[137] They also started a pediatric antibiotic platform to optimize treatment in children.[138]

Economic Costs of Antibiotic Resistance

Antibiotic resistance is not just a threat to global health, it is also a threat to the global economy.[139] Antibiotics are used as a growth promotor and a preventative measure in the food industry, specifically to protect animals from disease.[140] These antibiotics are necessary because of the general living conditions for many animals raised for meat and animal product production.[141] For instance, these animals often live in very small confinement where they cannot grow properly and they get wounds very quickly.[142] These wounds can become infected and animals often suffer from large masses, which is why they are typically given antibiotics preventatively.[143] These antibiotics end up in their system, and as a consequence, humans may ingest these antibiotics as well aiding the spread of antibiotic resistance.[144] One alternative is organic food, seeing as no antibiotics are used for animals in the organic food industry.[145] That, however, can be expensive for most households, so demand for cheaper, antibiotic treated meat remains steady.[146] More than half of all countries do not have drug laws on antibiotic use in animals.[147] In 2006, the EU banned the use of antibiotics as growth promotors in animals in an attempt to slow the spread of antibiotic resistance within the EU.[148]

Not all countries have drug laws specifically focused on antibiotics, in some countries, antibiotics can be bought over-the-counter, without a prescription.[149] This increases the spread of antibiotic resistance, because these over-the-counter antibiotics are mostly used by patients who have viral infections such as influenza.[150] The pharmaceutical industry has a huge impact on economic development.[151] In some countries, there are no low-cost antibiotics available, or pharmaceutical companies only distribute the most expensive type of antibiotics.[152] This high cost may make more expensive, which are sometimes the more effective antibiotics, inaccessible for less wealthy populations.[153] An additional challenge to

[134] Ibid.
[135] Global Antibiotic Research & Development Partnership, *About GARDP*, 2018.
[136] Ibid.
[137] Global Antibiotic Research & Development Partnership, *Programmes*, 2018.
[138] Ibid.
[139] McGowan, *Economic impact of antimicrobial resistance*, 2001, pp. 286–292.
[140] WHO, *Antibiotic Resistance,* 2018.
[141] WHO, *Stop using antibiotics in healthy animals to prevent the spread of antibiotic resistance*, 2017
[142] OIE, *The OIE Strategy on Antimicrobial Resistance and the Prudent Use of Antimicrobials*, 2016.
[143] Ibid.
[144] WHO, *Global Action Plan on Antimicrobial Resistance*, 2015.
[145] OIE, *The OIE Strategy on Antimicrobial Resistance and the Prudent Use of Antimicrobials*, 2016.
[146] FAO, *Organic Agriculture FAQ*, 2018.
[147] OIE, *Responsible and prudent use of antibiotics in animals*.
[148] European Medicines Agency, *Sales of veterinary antimicrobial agents in 29 EU/EEA countries in 2014*, 2016.
[149] WHO, *Global Action Plan on Antimicrobial Resistance*, 2015.
[150] Ibid.
[151] Shrestha et al., *Antimicrobial Resistance and Infection Control*, 2018; McGowan, *Economic impact of antimicrobial resistance*, 2001, pp. 286–292.
[152] Ibid., pp. 286–292.
[153] Ibid., pp. 286–292.

development is that the cheapest, most accessible antibiotic, penicillin, now has the greatest number of antibiotic-resistant strains.[154] This means that to find a cure for the bacterial infection, different, and more expensive antibiotics have to be used.[155] There is also a great financial cost for research into developing new antibiotics, because bacteria have become resistant to other types of medicines.[156] With the spread of antibiotic resistance, there is also a rise in mortality rates for bacterial infections.[157] This impacts a country not only in high medical costs, economic productivity in general can be suppressed when previously easily treatable diseases become more difficult to manage and treat.[158]

Capacity-building to Combat Antibiotic Resistance

There is widespread misunderstanding in the global health care sector as well as with the public, about proper antibiotic use and the threat of antibiotic resistance.[159] For instance, antibiotics are still used as a means to combat colds and flu, even though these viral infections are unaffected by antibiotics.[160] This accelerates the spread of antibiotic resistance, which is slowly leading to drug-resistant strains of bacterial infections like tuberculosis and pneumonia.[161] Even common infections such as urinary tract infections or a minor wound infection could become lethal again as they often were before the rise of antibiotics due to antibiotic resistance.[162] The annual Global Antibiotics Awareness Week, started by WHO in 2015, aims to educate the general public on the appropriate use of antibiotics.[163] This year's theme is: "Seek advice from a qualified professional before taking antibiotics."[164] In 2011, World Health Day was held on the theme of "antimicrobial resistance: no action today, no cure tomorrow."[165] WHO established six main themes for World Health Day, some of which address the root causes of antibiotic resistance, namely lack of commitment, weak surveillance of antibiotic use, lack of research on alternatives, poor drug quality, inappropriate drug use, and insufficient infection control.[166]

The lack of NAPs and national treatment plans, as well as a lack of drug laws specifically targeting antimicrobials and antibiotics, presents problems for implementation and indicates a lack of strong political will on this topic.[167] Patients often still get antibiotics for non-bacterial infections, or broad-spectrum antibiotics are prescribed where specific antibiotics would be more effective and are in the treatment guideline.[168] Treatment guidelines can be used by health care professionals to confirm if and when antibiotics are necessary, which antibiotic should be prescribed, and how the patient should use the antibiotics.[169] Member States can support this by developing and implementing standard treatment guidelines to ensure the optimization of the use of antibiotics in human and animal health.[170] This will ensure the guidance of purchasing and prescribing antibiotics in appropriate ways, as well as the regulation and control of promotional practices by the pharmaceutical industry.[171] These promotional

[154] WHO, *Global Action Plan on Antimicrobial Resistance*, 2015.
[155] Ibid.
[156] McGowan, *Economic impact of antimicrobial resistance*, 2001, pp. 286–292.
[157] Shrestha et al., *Antimicrobial Resistance and Infection Control*, 2018.
[158] Shrestha et al., *Antimicrobial Resistance and Infection Control*, 2018; WHO, *Global Action Plan on Antimicrobial Resistance*, 2015.
[159] WHO, *Global Antimicrobial Resistance Surveillance System*.
[160] Ibid.
[161] World Health Organization, *High levels of antibiotic resistance found worldwide, new data shows*, 2018.
[162] WHO, *World Antibiotic Awareness Week*, 2018; World Health Organization, *High levels of antibiotic resistance found worldwide, new data shows*, 2018.
[163] WHO, *World Antibiotic Awareness Week,* 2018; World Health Organization, *Global Antimicrobial Resistance Surveillance System*.
[164] WHO, *Global Antimicrobial Resistance Surveillance System*.
[165] WHO, *World Health Day 7 April 2011: Antimicrobial Resistance: No action today, no cure tomorrow*, 2011.
[166] Ibid.
[167] WHO, *Library of National Action Plans*, 2018.
[168] WHO, *World Antibiotic Awareness Week*, 2018; WHO, *Global Action Plan on Antimicrobial Resistance*, 2015.
[169] WHO, *Global Action Plan on Antimicrobial Resistance*, 2015, p. 17.
[170] Ibid., p. 17.
[171] WHO, *Global Action Plan on Antimicrobial Resistance*, 2015, p. 17.

practices often happen when pharmaceutical companies have contracts with drug producing businesses, to only sell their drug for a period of time, or to make the costs for the patient higher, dividing the profit between the pharmaceutical business and the producer.[172] The costs for research and development that is necessary to create new antibiotics are high; therefore, the profit from creating a new antibiotic is very low, which is one of the reasons that few new antibiotics are being currently produced.[173] Finding ways to incentive pharmaceutical companies to conduct research and development into new antibiotics may help offset these costs and support more innovation.[174]

Conclusion

Antibiotic resistance is one of today's greatest threats to global health; if the spread of antibiotic resistance is not contained, antibiotics will have diminished effects in the future and infections will be increasingly difficult to treat.[175] Antibiotic resistance, as a part of AMR, has an influence on sustainable development, negatively impacting humans, animals and the environment.[176] Antibiotic resistance and the spread of antibiotic-resistant bacteria can be reduced through a One Health approach, working to stop AMR in all areas through coordinated efforts in all sectors.[177] There is a large gap in knowledge, due to a lack of data and education, as well as a lack standard regulations and treatment procedures, to govern the appropriate distribution and use of antibiotics.[178] Focusing on a One Health approach to take measures against antibiotic resistance in the form of data collection, research on current resistant bacteria and new antibiotics, and educating the public, health care professionals, the agricultural sector, and the pharmaceutical industry are among the ways to halt the spread of antibiotic resistance and its effects on global health.[179]

Further Research

While conducting research on this topic, delegates should consider the following questions: How can we get to a place where the One Health approach is used by all relevant actors? What barriers do Member States encounter when educating their citizens? How can measures be used to assess educational outreach programs? What barriers do Member States face when they attempt to adapt and implement the Global Action Plan? What can WHO do to strengthen NAPs, and how can Member States support each other in combating antibiotic resistance? What are some necessary and appropriate measures that could be taken by Member States to ensure consistent national treatment guidelines and access to antibiotics? What can be done by international organizations and NGOs to ensure better usage of antibiotics and more awareness of the proper use of antibiotics? How can we ensure access to health care and antibiotics to communities where infections are likely to arise? How can Member States prevent future spread of antibiotic resistance?

Annotated Bibliography

University of Kwazulu-Natal. (2017). *Antimicrobial Resistance and the Environment: Implications for SDGs.* Retrieved 15 August 2018 from: http://www.who.int/antimicrobial-resistance/interagency-coordination-group/AMR_in_the_environment_implications_for_SDGs_SYEssack_UKZN.pdf?ua=1
> *This document contains infographics, statistics and objectives on the current situation with AMR and the environment, and the roles of the OIE, WHO and the FAO in slowing the spread of AMR. The document examines AMR from the perspective of its impact on*

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[172] Roka et al., *The global threat of antimicrobial resistance: science for intervention*, 2015.
[173] Ibid.
[174] Ibid.
[175] WHO, *Antibiotic resistance – a threat to global health security*, 2013.
[176] University of Kwazulu-Natal, *Antimicrobial Resistance and the Environment: Implications for SDGs*, 2018.
[177] WHO, *Global Action Plan on Antimicrobial Resistance*, 2015.
[178] Ibid.
[179] Ibid.

the SDGs and development. This will help delegates understand the connection between human health, environmental health, animal health, sustainable development, and AMR.

World Health Organization. (n.d.). *Collaborating Centers: antimicrobial resistance, antimicrobial use, and infection protection* [Website]. Retrieved 18 September 2018 from: http://www.who.int/antimicrobial-resistance/publications/WHO_Collaborating_Centers/en/
> *The One Health approach is critical to meaningful reductions in the spread of antibiotic resistance. These CCs provide a means of international cooperation. Delegates can gain insight in what these centers do, how they help fill current gaps, and how they can be used in the future. This source provides an overview of all CCs that work on AMR, so that delegates can see what the current situation is, when CCs have been established, and what current gaps in CCs are.*

World Health Organization. (n.d.). *Global Antimicrobial Resistance Surveillance System* [Infographic]. Retrieved 7 July 2018 from: http://www.who.int/antimicrobial-resistance/global-action-plan/surveillance/GLASS-infographic-(web).pdf?ua=1
> *This infographic provides delegates with insight into the logistics of GLASS, as it is one of the key initiatives to gain research knowledge about AMR. Seeing that global initiatives exist and how they fall under the One Health approach will prove to be inspirational for possible discussions during the conference. This source is also useful to see what GLASS is and does, and where the current gaps lie in data collection.*

World Health Organization. (2015). *Global Action Plan on Antimicrobial Resistance*. Retrieved 16 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/193736/9789241509763_eng.pdf?sequence=1
> *This action plan addresses antibiotic resistance, the most urgent drug resistance trend. Delegates can gain knowledge about the One Health approach and the different directives and objectives of WHO, such as improving awareness, strengthening knowledge, and optimizing the use of antimicrobials. This action plan can provide delegates with an idea of current actions and gaps within the implementation of this Global Action Plan. Other key documents and initiatives are based upon this Global Action Plan, so researching this source is a good starting point for delegates.*

World Health Organization. (2016). *Antimicrobial Resistance: A Manual for developing national action plans.* Retrieved 7 July 2018 from: http://apps.who.int/iris/bitstream/handle/10665/204470/9789241549530_eng.pdf;jsessionid=82D898C701CA8E9D1CC63EC4402DD523?sequence=1
> *This manual for writing NAPs provides a general idea of what Member States might do to help prevent the spread of antibiotic and AMR. Delegates can find the National Action Plan that their government has issued, and then read it with this as a guideline. Delegates can also identify what their NAP is lacking, what other NAPs are useful, or use it as a guideline for discussion if their government has not issued a NAP.*

World Health Organization. (2017). *Global antimicrobial resistance surveillance system (GLASS) report: early implementation 2016-2017*. Retrieved 16 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/259744/9789241513449-eng.pdf?sequence=1
> *This report gives an overview of the outcome of the goals set in the Global Action Plan. This source contains information on the scope of the issue, the threat of AMR, and the results of the early implementation of GLASS. Delegates can use this information to see what initiatives have been taken, and what actions are still to be considered.*

World Health Organization. (2018). *Antimicrobial Resistance* [Fact Sheet]. Retrieved 7 July 2018 from: http://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance
> *This fact sheet explains the definition of antimicrobial resistance and explores the global origins and consequences of AMR, presenting an overview of current resistance in common infections such as tuberculosis. This will prove useful for delegates because understanding how exactly antibiotic resistance falls under the scope of AMR is necessary to have fruitful debates on this topic.*

World Health Organization. (2018). *High levels of antibiotic resistance found worldwide, new data shows* [Article]. Retrieved 7 July 2018 from: http://www.who.int/mediacentre/news/releases/2018/antibiotic-resistance-found/en/

> *This source gives statistics on rates of antibiotic resistance, revealing a high level of antibiotic resistance in high- and low- income countries. These numbers are linked to GLASS, providing insights into what GLASS does, and the number of people affected by antibiotic resistance, as well as which diseases are prone to antibiotic resistance. This resource will help delegates understand the scope of the issue, how it impacts each Member State, and possible solutions to the spread of antibiotic resistance.*

World Health Organization. (2018). *Library of national action plans* [Database]. Retrieved 16 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/193736/9789241509763_eng.pdf?sequence=1

> *This source is a database with all the existing NAPs. This source shows the wide variety in NAP's, from incredibly broad proposals that span a few pages, to very detailed and explicit proposals that are more than a hundred pages in length. Delegates can use this information to confirm if their country has issued a NAP, and if so, to read the action plan that their country has written. They can also read other NAPs leading them to further research.*

World Organisation for Animal Health. (2016). *The OIE Strategy on Antimicrobial Resistance and the Prudent Use of Antimicrobials*. Retrieved 15 August 2018 from: http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/PortailAMR/EN_OIE-AMRstrategy.pdf

> *This OIE strategy shows that the use of antibiotics has declined since 1990, but that a lot of work is still to be done. It shows possible solutions for antibiotic resistance in animals and the spread of resistant strains to humans, as well as linking the resistance between animals, humans and the environment. This linkage is very important for delegates to understand the animal and environmental aspect of antibiotic resistance.*

Bibliography

European Medicines Agency. (2016). *Sales of veterinary antimicrobial agents in 29 EU/EEA countries in 2014*. Retrieved 12 October 2018 from: https://www.ema.europa.eu/documents/report/sixth-esvac-report-sales-veterinary-antimicrobial-agents-29-european-countries-2014_en.pdf

Food and Agriculture Organization of the United Nations. (2016). *The FAO Action Plan on Antimicrobial Resistance 2016-2020.* Retrieved 9 August 2018 from: http://www.fao.org/3/a-i5996e.pdf

Food and Agriculture Organization of the United Nations. (2018). *Organic Agriculture FAQ* [Website]. Retrieved 12 October 2018 from: http://www.fao.org/organicag/oa-faq/oa-faq5/en/

Global Antibiotic Research & Development Partnership. (2018). *About GARDP* [Website]. Retrieved 11 August 2018 from: https://www.gardp.org/about/

Global Antibiotic Research & Development Partnership. (2018). *Programmes* [Website]. Retrieved 11 August 2018 from: https://www.gardp.org/programmes/

Interagency Coordination Group on Antimicrobial Resistance. (2017). *Proposed work plan for the Ad-hoc Interagency Coordination Group on antimicrobial resistance.* Retrieved 12 August 2018 from: http://www.who.int/antimicrobial-resistance/interagency-coordination-group/FINAL_IACG_DRAFT_WORKPLAN.pdf?ua=1

The Kingdom of the Netherlands, Ministry of Economic Affairs. (2014). *Reduced and Responsible Policy on the use of antibiotics in food-producing animals in the Netherlands*. Retrieved 12 October 2018 from: https://www.government.nl/documents/leaflets/2014/02/28/reduced-and-responsible-use-of-antibiotics-in-food-producing-animals-in-the-netherlands

McGowan, J. E. (2001). Economic impact of antimicrobial resistance. *Emerging Infectious Diseases*, 7(2): 286–292. Retrieved 12 October 2018 from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2631707/pdf/11294725.pdf

Roka et al. (2015). The global threat of antimicrobial resistance: science for intervention. *New Microbe and New Infect 2015,* 6: 22-29. Retrieved 13 October 2018 from: https://ac.els-cdn.com/S2052297515000293/1-s2.0-S2052297515000293-main.pdf?_tid=39a73cb5-2c90-4dd7-99ec-2d34ee8c7919&acdnat=1539726879_6b44e624ffaa90ca2daa41ed44a8a8c0

Save Our Antibiotics. (2015). *Farm antibiotic use in the Netherlands.* Retrieved 12 October 2018 from: http://www.saveourantibiotics.org/media/1751/farm-antibiotic-use-in-the-netherlands.pdf

Shrestha et al. (2018). Enumerating the economic cost of antimicrobial resistance per antibiotic consumed to inform the evaluation of interventions affecting their use. *Antimicrobial Resistance and Infection Control*, 7(98). Retrieved 12 October 2018 from: https://doi.org/10.1186/s13756-018-0384-3

United Nations, General Assembly, Seventieth session. (2015*). Transforming Our World: the 2030 Agenda for Sustainable Development (A/RES/70/1)*. Retrieved 8 August 2018 from: http://undocs.org/A/RES/70/1

United Nations, General Assembly, Seventy-First session. (2016). *Political Declaration of the high-level meeting of the General Assembly on antimicrobial resistance (A/RES/71/3)* [Resolution]. Adopted without reference to a Main Committee (A/71/L.2). Retrieved 12 August 2018 from: http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/71/3

United States of America, Centers for Disease Control and Prevention. (2017). *Infographic: Antibiotic Resistance The Global Threat.* Retrieved 4 August 2018 from: https://www.cdc.gov/globalhealth/infographics/pdf/World_Antibiotic_Awarness_Infographic-1st.pdf

United States of America, Centers for Disease Control and Prevention. (2018). *Antibiotic Resistance Questions and Answers* [Website]. Retrieved 4 August 2018 from: https://www.cdc.gov/antibiotic-use/community/about/antibiotic-resistance-faqs.html

University of Kwazulu-Natal. (2017). *Antimicrobial Resistance and the Environment: Implications for SDGs.* Retrieved 15 August 2018 from: http://www.who.int/antimicrobial-resistance/interagency-coordination-group/AMR_in_the_environment_implications_for_SDGs_SYEssack_UKZN.pdf?ua=1

World Health Organization. (n.d.). *Collaborating Centers: antimicrobial resistance, antimicrobial use, and infection protection* [Website]. Retrieved 18 September 2018, from: http://www.who.int/antimicrobial-resistance/publications/WHO_Collaborating_Centers/en/

World Health Organization. (n.d.). *Global Antimicrobial Resistance Surveillance System* [Infographic]. Retrieved 9 August 2018 from: http://www.who.int/antimicrobial-resistance/global-action-plan/surveillance/GLASS-infographic-(web).pdf?ua=1

World Health Organization. (n.d.). *Global Antimicrobial Resistance Surveillance System (GLASS)* [Website]. Retrieved 9 August 2018 from: http://www.who.int/glass/en/

World Health Organization. (1946). *Constitution of the World Health Organization*. Retrieved 7 August 2018 from: https://archive.org/details/WHO-constitution

World Health Organization. (2011). *World Health Day 7 April 2011: Antimicrobial Resistance: No action today, no cure tomorrow* [Website]. Retrieved 29 October 2018 from: https://www.who.int/world-health-day/2011/en/

World Health Organization. (2013). *Antibiotic resistance – a threat to global health security* [Website]. Retrieved 29 October 2018 from: http://www.who.int/antimicrobial-resistance/events/wha66_side_event/en/

World Health Organization. (2016). *Joint FAO/WHO Expert Committee on Food Additives (JECFA)* [Website]. Retrieved 29 October 2018 from: https://www.who.int/foodsafety/areas_work/chemical-risks/jecfa/en/

World Health Organization. (2016). *National Action Plans* [Website]. Retrieved 10 August 2018 from: http://www.who.int/antimicrobial-resistance/national-action-plans/en/

World Health Organization. (2017). *Global antimicrobial resistance surveillance system (GLASS) report: early implementation 2016-2017*. Retrieved 16 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/259744/9789241513449-eng.pdf?sequence=1

World Health Organization. (2017, November 7). *Stop using antibiotics in healthy animals to prevent the spread of antibiotic resistance* [News Release]. Retrieved 12 October 2018 from: http://www.who.int/news-room/detail/07-11-2017-stop-using-antibiotics-in-healthy-animals-to-prevent-the-spread-of-antibiotic-resistance

World Health Organization. (2017). *What is antimicrobial resistance?* Retrieved 5 August 2018 from: http://www.who.int/features/qa/75/en/

World Health Organization. (2018). *Antibiotic resistance*. Retrieved 4 August 2018 from: http://www.who.int/news-room/fact-sheets/detail/antibiotic-resistance

World Health Organization. (2018). *Antimicrobial Resistance* [Fact Sheet]. Retrieved 7 July 2018 from: http://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

World Health Organization. (2018). *Antimicrobial Resistance and the SDGs: challenges and opportunities* [Presentation]. Retrieved 15 August 2018 from: http://www.who.int/antimicrobial-resistance/interagency-coordination-group/AMR_in_the_environment_implications_for_SDGs_SYEssack_UKZN.pdf?ua=1

World Health Organization. (2018, January 29). *High levels of antibiotic resistance found worldwide, new data shows* [News Article]. Retrieved 7 July 2018 from: http://www.who.int/mediacentre/news/releases/2018/antibiotic-resistance-found/en/

World Health Organization. (2018). *Library of national action plans.* Retrieved 10 August 2018 from: http://www.who.int/antimicrobial-resistance/national-action-plans/library/en/

World Health Organization. (2018). *9th Strategic and Technical Advisory Group on antimicrobial resistance (STAG-AMR) (WHO/DGO/AMR/2018.1)* [Meeting records]. Retrieved 20 October 2018 from: https://www.who.int/antimicrobial-resistance/events/26-27-Feb-2018-STAG-meeting-report-and-Recommendations.pdf?ua=1

World Health Organization. (2018). *Strategic and Technical Advisory Group on antimicrobial resistance (STAG-AMR), Report of Ninth Meeting, 26-27 February 2018, WHO Headquarters, Geneva*. Retrieved 20 October 2018, from: https://www.who.int/antimicrobial-resistance/events/26-27-Feb-2018-STAG-meeting-report-and-Recommendations.pdf?ua=1

World Health Organization. (2018). *World Antibiotic Awareness Week* [Website]. Retrieved 10 August 2018 from: http://www.who.int/campaigns/world-antibiotic-awareness-week/en/

World Health Organization, World Health Assembly, Fifty-first session. (1998). *Emerging and other communicable diseases: antimicrobial resistance (WHA51.17)* [Resolution]. Retrieved 8 August 2018 from: http://apps.who.int/medicinedocs/index/assoc/s16334e/s16334e.pdf?ua=1

World Health Organization, World Health Assembly, Fifty-fourth session. (2001). *Global health security: epidemic alert and response (WHA54.14)* [Resolution]. Retrieved 8 August 2018 from: http://apps.who.int/medicinedocs/index/assoc/s16356e/s16356e.pdf?ua=1

World Health Organization, World Health Assembly, Fifty-fourth session. (2001). *WHO medicines strategy (WHA54.11)* [Resolution]. Retrieved 8 August 2018 from: http://apps.who.int/medicinedocs/index/assoc/s16336e/s16336e.pdf?ua=1

World Health Organization, World Health Assembly, Fifty-eighth session. (2005). *Improving the containment of antimicrobial resistance (WHA58.27)* [Resolution]. Retrieved 8 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/20377/WHA58_27-en.pdf?sequence=1

World Health Organization, World Health Assembly, Sixtieth session. (2007). *Progress in the rational use of medicines (WHA60.16)* [Resolution]. Retrieved 8 August 2018 from: http://apps.who.int/gb/ebwha/pdf_files/WHASSA_WHA60-Rec1/E/reso-60-en.pdf?ua=1#page=27

World Health Organization, World Health Assembly, Sixtieth session. (2007). *Progress reports on technical and health matters – Improving the containment of antimicrobial resistance (WHA60/28)* [Resolution]. Retrieved 8 August 2018 from: http://apps.who.int/medicinedocs/index/assoc/s16339e/s16339e.pdf?ua=1

World Health Organization, World Health Assembly, Sixty-second session. (2009). *Progress reports on technical and health matters (WHA62/23)* [Resolution]. Retrieved 8 August 2018 from: http://apps.who.int/gb/ebwha/pdf_files/A62/A62_23-en.pdf?ua=1#page=17

World Health Organization, World Health Assembly, Sixty-seventh session. (2014). *Antimicrobial resistance (WHA67.25)* [Resolution].Retrieved 7 August 2018 from: http://apps.who.int/medicinedocs/documents/s21452en/s21452en.pdf

World Health Organization, World Health Assembly, Sixty-eighth session. (2015). *Antimicrobial resistance. Draft global action plan on antimicrobial resistance (WHA68/20)* [Resolution]. Retrieved 7 August 2018 from: http://apps.who.int/gb/ebwha/pdf_files/WHA68/A68_20-en.pdf

World Health Organization, World Health Assembly, Sixty-eighth session. (2015). *Global Action Plan on Antimicrobial Resistance.* Retrieved 8 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/193736/9789241509763_eng.pdf?sequence=1

World Health Organization, Food and Agriculture Organization of the United Nations, World Organization for Animal Health. (2016). *Antimicrobial Resistance: a Manual for Developing National Action Plans.* Retrieved 10 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/204470/9789241549530_eng.pdf?sequence=1

World Organisation for Animal Health. (n.d.). *Responsible and Prudent use of antibiotics in animals.* Retrieved 12 October 2018 from: http://www.oie.int/fileadmin/home/eng/Media_Center/docs/pdf/PortailAMR/EN_InfographieAMRLR.pdf

World Organisation for Animal Health. (2016). *The OIE Strategy on Antimicrobial Resistance and the Prudent Use of Antimicrobials.* Retrieved 15 August 2018 from: http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/PortailAMR/EN_OIE-AMRstrategy.pdf

II. Addressing Mental Health in Protracted Humanitarian Crises

"Protracted crises disrupt people's lives, economies and societies for prolonged periods of time. These crises break health systems. The Sustainable Development Goals will never be achieved if we do not address both the root causes and consequences of protracted emergencies."[180]

Introduction

The World Health Organization (WHO) defines mental health as a "state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community."[181] Mental health is a critical component of an individual's overall health, which is defined by WHO as "a state of complete well-being, and not simply the absence of disease."[182] Mental health is linked to specific mental disorders including depression, anxiety disorders, schizophrenia, bipolar disorder, substance use disorders, intellectual disabilities, and developmental and behavioral disorders.[183] Individuals diagnosed with mental disorders are at increased risk of disability and mortality compared to those without a mental disorder.[184] For example, individuals with depression and schizophrenia are up to 60% more likely to die prematurely than the general population.[185] Furthermore, certain individuals and groups, including people exposed to complex emergencies, are at a significantly higher risk of developing mental disorders.[186]

As of 2018, nearly half a billion people in more than 20 countries are impacted by protracted crises.[187] Protracted crises have been defined as "environments in which a significant proportion of the population is acutely vulnerable to death, disease, and disruption of livelihoods over a prolonged period of time."[188] A protracted crisis is a complex emergency, which the WHO has identified as a combination of large-scale internal displacement and fragile economic, political, and social institutions.[189] Protracted crises are different from acute crises, which represent a brief emergency that causes a short-term crisis, such as a natural disaster.[190] After an acute emergency, the conditions of an affected community usually return to their pre-crisis status once the crisis is over.[191] Protracted crises, however, last longer than their acute counterparts, and contain institutional vulnerabilities, including a lack of strong local governance, in the affected area.[192] Protracted crises undermine the local institutions which are necessary to contain the effects of the crises.[193] These types of crises remain a prominent threat to global health, and WHO currently responds to health needs in more than 30 designated protracted crises, including in South Sudan, where 1.7 million people have been displaced since the outbreak of conflict in 2013.[194] As conflict is a common theme in protracted crises, persistent fighting can damage or destroy health facilities and cause health workers to flee, causing the overall health system in the impacted area to crumble.[195] In such conditions, long-term humanitarian assistance may become more complicated.[196] Humanitarian assistance refers to the aid given to crisis-stricken populations with a goal to save lives and alleviate

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[180] WHO, *WHO says address protracted emergencies to achieve Sustainable Development Goals*, 2018.
[181] WHO, *Mental Health: a state of well-being*, 2018.
[182] WHO, *Constitution of the World Health Organization*, 1946.
[183] WHO, *Comprehensive Mental Health Action Plan 2013-2020*, 2013, p. 6; WHO, *Mental Health Atlas*, 2017.
[184] WHO, *Comprehensive Mental Health Action Plan 2013-2020*, 2013, p. 6.
[185] Ibid., p. 7.
[186] Ibid.
[187] FAO, *Building resilience in protracted crises*, 2018.
[188] FAO, *The State of Food Insecurity in the World: Addressing food insecurity in protracted crises*, 2010, p. 12.
[189] WHO, *Complex emergencies*, 2018.
[190] FAO, *The State of Food Insecurity in the World: Addressing food insecurity in protracted crises*, 2010, p. 16.
[191] Ibid.
[192] Sphere, *Sphere Standards in Protracted Crises*, 2017, p. 5.
[193] FAO, *The State of Food Insecurity in the World: Addressing food insecurity in protracted crises*, 2010, p. 12.
[194] WHO, *WHO says address protracted emergencies to achieve Sustainable Development Goals*, 2018; WHO, *Placing health at the heart of humanitarian action*, 2018.
[195] WHO, *WHO says address protracted emergencies to achieve Sustainable Development Goals*, 2018.
[196] Ibid.

suffering.[197] Relevant actors including WHO, Member States, and partnering organizations are required to engage more deeply with the social and economic needs of impacted communities than would be required in an acute crisis.[198]

Populations impacted by protracted crises are presented with numerous obstacles regarding not only physical health, but mental health and psychological well-being.[199] Structural risk factors including extreme poverty, discrimination, and political oppression are all causes of mental distress in crises-stricken populations.[200] During and after crises, these vulnerable groups are more likely to be impacted by a variety of mental health problems, and rates of mental disorders tend to double after emergencies.[201] Crisis-induced social problems are a factor in the development of mental disorders and can include family separation, depletion and destruction of local resources, and an increase in sexual and gender-based violence (SGBV).[202] Over 130 million people require humanitarian assistance worldwide.[203] Providing mental health care to these individuals in a protracted crisis requires special attention due to three recurring problems: increased presence of mental health problems, weakened local mental health infrastructure, and a lack of inter-agency coordination.[204]

International and Regional Framework

The right to health was first established in the *Constitution of the World Health Organization* (1946) and provides every individual the right to the highest attainable standard of health without distinction of race, religion, political belief, economic, or social status.[205] The *Universal Declaration of Human Rights* (1948) further recognizes the right to health, including mental health, regardless of social or economic circumstance.[206] The *International Convention on the Elimination of All Forms of Racial Discrimination* (1965) calls for the right to public health and medical care to all people without distinction of race, sex, language, or religion.[207] The *International Covenant on Civil and Political Rights* (1966) promotes the inherent rights to life, liberty, and security of person, regardless of status.[208] The *Convention on the Elimination of all Forms of Discrimination against Women* (1979) and the *Convention on the Rights of the Child* (1989) protect the rights of women and children to access public health care without discrimination.[209] The *Sendai Framework for Disaster Risk Reduction* (2015) identifies the provision of psychosocial support and mental health services to all in need as a key to effectively enhancing disaster response preparedness.[210]

The *2030 Agenda for Sustainable Development* (2030 Agenda), adopted in 2015 by the General Assembly, comprehensively addresses the issues of development and health, particularly mental health, through the Sustainable Development Goals (SDGs).[211] SDG 3, on good health and well-being, directly

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[197] ReliefWeb, *Glossary of Humanitarian Terms*, 2008, p. 31.
[198] International Committee of the Red Cross, *Protracted Conflict and Humanitarian Action: Some Recent ICRC Experiences*, 2016.
[199] WHO, *Constitution of the World Health Organization*, 1946; WHO, *Mental health: a state of well-being*, 2018.
[200] IASC, *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, 2007, p. 2.
[201] WHO, *Building Back Better: Sustainable Mental Health Care after Emergencies*, 2013, p. 4.
[202] IASC, *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, 2007, p. 2.
[203] WHO, *Comprehensive Mental Health Action Plan 2013-2020*, 2013, p. 7.
[204] Ibid.
[205] WHO, *Constitution of the World Health Organization*, 1946.
[206] UN General Assembly, *Universal Declaration of Human Rights (A/RES/217 A (III))*, 1948.
[207] UN General Assembly, *International Convention on the Elimination of All Forms of Racial Discrimination (A/RES/2106 (XX))*, 1965.
[208] UN General Assembly, *International Covenant on Civil and Political Rights (A/RES/2200 (XXI))*, 1966.
[209] UN General Assembly, *Convention on the Elimination of All Forms of Discrimination against Women (A/RES/34/180)*, 1979; General Assembly, *Convention on the Rights of the Child (A/RES/44/25)*, 1989.
[210] UN General Assembly, *Sendai Declaration and Framework for Disaster Risk Reduction 2015-2030 (A/RES/69/283)*, 2015.
[211] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

addresses the promotion of mental health as a priority through targets 3.4 and 3.5.[212] Target 3.4 aims to reduce premature mortality from non-communicable diseases, including suicide, through treatment and prevention, and by promoting mental health and well-being.[213] Target 3.5 further aims to prevent and treat substance abuse disorders.[214] The 2030 Agenda further addresses factors which give rise to violence, insecurity, and injustice.[215] These factors, including inequality, corruption, poor governance, and illicit financial and arms flows, all aggravate the effects of protracted crises.[216]

Role of the International System

A wide range of international actors are involved in addressing mental health in protracted crises. The World Health Assembly (WHA) has adopted numerous resolutions involving the promotion of mental health, starting with WHA resolution 28.84 of 1975 on "Promotion on Mental Health," and WHA resolution 29.21 of 1976 on "Psychosocial factors and health."[217] WHA has more recently focused on addressing the impact of prevalent and widespread mental disorders, as exemplified by 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."[218] WHA resolution 65.4 highlights that exposure to humanitarian emergencies is a predisposition for mental health problems and psychological trauma, in addition to the disruption of institutions and social structures which provide care to people with pre-existing conditions as a result of the emergency.[219] Further resolutions address health crises in emergency situations, including WHA resolution 64.10 of 2011 on "Strengthening national health emergency and disaster management capacities."[220]

WHO's approach toward mental health is outlined by the *Mental Health Action Plan 2013-2020* (2013), which emphasizes developing effective policies and plans to protect the mental health and well-being of vulnerable groups, including populations impacted by protracted crises.[221] The Mental Health: Evidence and Research team (MER) operates under WHO and aims to utilize available resources to reduce the global burden of mental disorders.[222] MER is responsible for three projects: the Mental Health Atlas, the World Health Organization Assessment Instrument for Mental Health Systems (WHO-AIMS), and Mental Health in Emergencies.[223] These projects are valuable assessment tools which aim to increase available information and data on mental health, which assists in implementing better health care services to individuals and communities.[224]

In 2016, WHO established the Health Emergencies Programme (HEP) to work with Member States to address crises by strengthening prevention and preparedness measures.[225] HEP works with Member States and other partner organizations to prevent, respond to, and recover from hazards that contribute to health emergencies, including disasters and conflict.[226] WHO uses HEP to collaborate with local ministries of health and their partners to identify where medical needs are greatest, and ensure that these

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[212] UN DESA, *Sustainable Development Goal 3: Ensure healthy lives and promote well-being for all at all ages*, 2018.
[213] Ibid.
[214] Ibid.
[215] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[216] Ibid.
[217] UN University et al., *Mental Health, Well-being and Disability: A New Global Priority / Key United Nations Resolutions and Documents*, 2015.
[218] 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.
[219] Ibid.
[220] WHO, *Strengthening national health emergency and disaster management capacities (WHA64.10)*, 2011.
[221] WHO, *Mental Health Action Plan 2013-2020*, 2013, p. 11.
[222] WHO, *Mental health evidence and research (MER)*, 2018.
[223] Ibid.
[224] Ibid.
[225] WHO, *WHO's new Health Emergencies Programme*, 2016.
[226] Ibid.

areas receive supplies and personnel.[227] Further goals of HEP are to ensure readiness to combat public health risks, which include mental health risks in high-vulnerability countries, and to provide life-saving health services to populations affected by ongoing emergencies.[228]

Providing health services during emergencies requires the collaboration of numerous partner organizations including non-governmental organizations (NGOs) and civil society organizations (CSOs).[229] The *Sphere Standards in Protracted Crises*, organized by the Sphere Project, an organization of humanitarian agencies with a common aim to improve the quality of humanitarian assistance, are designed to meet the needs of disaster-affected populations, with special attention to those experiencing a protracted crisis.[230] These standards cover a range of topics, including a people-centered humanitarian response; coordination and collaboration between actors; better assessment, design, and response; and aid worker performance.[231] International NGOs play an important role in information sharing; the International Committee of the Red Cross has additionally compiled information addressing the challenges presented in areas impacted by protracted crises, this information is organized in the report *Protracted Conflict and Humanitarian Action.*[232] The report offers five main ways to improve humanitarian response in protracted crises including: focusing on long-term outcomes, achieving development in addition to providing immediate assistance, inter-organization partnering to ensure humanitarian continuity, increasing multi-year programming and financing, and deepening community engagement.[233]

Capacity Building in Crisis-Stricken Areas

Protracted crises make up the majority of today's humanitarian emergencies.[234] Areas impacted by protracted crises experience chronic vulnerability due to a lack of effective governance and an absence of social safety nets, including universal health-care and welfare support.[235] In 2013, WHO published *Building Back Better: Sustainable Mental Health Care after Emergencies*, a report designed to address the major gaps that remain in realizing comprehensive, community-based health-care worldwide, including: fragile local infrastructure, internal displacement, and inadequate resources.[236] The report affirms the importance of centering mental health services on accessibility to communities, particularly in areas rebuilding from emergencies.[237] Mental health infrastructure can be weakened as a result of emergencies; buildings and supplies can be damaged, and local health workers may be forced out of the area.[238] The WHO Service Organization Pyramid contained in the report illustrates the various services necessary to achieve community-based mental health care, including: clinical services and targeted psychosocial support, strengthening community and family support, and social challenges and barriers in accessing basic services, and ensuring basic security.[239]

WHO provides technical guidance for building institutional capacity for governments, international organizations, and other relevant actors.[240] In 2008, WHO published the Mental Health Gap Action Program (mhGAP) to provide governments, international organizations, and other stakeholders with a

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[227] Ibid.
[228] Ibid.
[229] Ibid.
[230] Sphere Project, *Sphere Standards in Protracted Crises*, p. 21.
[231] Sphere Project, *How to use this chapter*, 2018.
[232] International Committee of the Red Cross, *Protracted Conflict and Humanitarian Action: Some Recent ICRC Experiences*, 2016.
[233] Ibid., p 33.
[234] UN OCHA, *An end in sight: Multi-year planning to meet and reduce humanitarian needs in protracted crises*, 2015, p. 3.
[235] Ibid.
[236] WHO, *Building Back Better: Sustainable Mental Health Care after Emergencies*, 2013, p. 16.
[237] Ibid., p. 19.
[238] Ibid., p. 19.
[239] Ibid., p. 19.
[240] WHO, *What we do*, 2018.

direct set of activities and programs for improving care for mental disorders.[241] The mhGAP outlines the "General Principles of Care," a set of appropriate clinical practices for health care providers interacting with individuals seeking mental health care.[242] The "Master Chart" is the key component of the document, providing information on common presentations of mental disorders, and its modules provide a tool for clinical decision-making and management.[243] The modules are categorized by "assessment" and "management," giving health care providers guidelines on administering appropriate intervention.[244] In 2010, the mhGAP Intervention Guide (mhGAP-IG) was released as a technical tool aimed at health-care providers to assist in implementing the mhGAP.[245] Upon a mandated five-year review of both the mhGAP and mhGAP-IG, WHO collaborated with the Office of the United Nations High Commissioner for Refugees (UNHCR) to release the *mhGAP Humanitarian Intervention Guide* (mhGAP-HIG), an adaptation of the mgGAP-IG designed as a simple, practical tool to provide specialized support to areas impacted by humanitarian emergencies through the assessment and management of mental, neurological, and substance abuse conditions.[246] The mhGAP-HIG is guided by the UNHCR *Operational Guidance for Mental Health and Psychosocial Support in Refugee Operations* (2013), which was created to address mental health concerns in areas experiencing a breakdown of traditional community structures and a lack of trained medical personnel.[247] This guide was developed to be adapted for different contexts, which causes a lack of standardized implementation due to varying local capacities.[248]

Social stigma remains a significant barrier for providing mental health services to crisis-stricken areas.[249] Common negative beliefs surround mental disorders, including that they are reflective of personal weakness or that they are originated by witchcraft or supernatural phenomena.[250] This stigma can extend to health-care settings due to a lack of systematic human rights training for mental health professionals.[251] Stigma against mental health also impacts access to mental health care, as a diagnosis of a mental disorder may disqualify patients from receiving full health coverage.[252]

Case Study: Somalia
Each protracted crisis is unique and cannot be generalized, but development-oriented approaches in current crisis-stricken areas can provide a basis to learn from for further assistance.[253] Somalia has been in a state of internal conflict since 1991, and is an example of successful improvements to access to mental health services within an environment facing a lack of resources, rampant social stigma, and inhumane treatment.[254] During the conflict, Somali public institutions have weakened, leaving a large number of Somalis without access to basic health care.[255] Even before the outbreak of conflict, the

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[241] WHO, *Mental Health Gap Action Programme: Scaling up care for mental, neurological, and substance use disorders,* 2008, p. 4.
[242] WHO, *Mental Health Gap Action Programme: Scaling up care for mental, neurological, and substance use disorders*, 2008, p. 3.
[243] Ibid.
[244] Ibid.
[245] Ibid.
[246] WHO, *mhGAP Evidence Resource Centre*, 2018; WHO & UNHCR, *mhGAP Humanitarian Intervention Guide (mhGAP-HIG): Clinical management of mental, neurological, and substance use conditions in humanitarian emergencies*, 2015.
[247] UNHCR, *Operational Guidance: Mental Health & Psychosocial Support Programming for Refugee Operations*, 2013; WHO, *WHO says address protracted emergencies to achieve Sustainable Development Goals,* 2018.
[248] Mental Health Innovation, *Operational Guidance on Mental Health & Psychosocial Support Programming for Refugee Operations*, 2013.
[249] UN HRC, *Mental Health and Human Rights: Report of the United Nations High Commissioner for Human Rights (A/HRC/34/32)*, 2017, p. 7.
[250] Ibid.
[251] Ibid.
[252] Ibid.
[253] UN OCHA, *An end in sight: Multi-year planning to meet and reduce humanitarian needs in protracted crises*, 2015, p. 5.
[254] WHO, *Building Back Better: Sustainable Mental Health Care after Emergencies*, 2013, p. 69.
[255] Ibid.

Somali health system lacked capacity.[256] Mental health services were not available through primary health care coverage, and the country suffered from a lack of trained mental health workers.[257] Institutional care was provided in psychiatric facilities with poor living conditions and no psychotropic medications were available for treatment.[258] Social stigma also prevented mental health care access, with many Somalis believing mental disorders could only be cured by traditional healers.[259]

WHO has launched the Chain-Free Initiative in Mogadishu, which focuses on providing humane treatment and eliminating social stigma.[260] The first phase of the approach involves creating chain-free hospitals and promoting more humane facilities.[261] The second phase focuses on providing education and training to the families of individuals with mental disorders.[262] The third and final phase intends to remove "invisible chains," or societal stigma and human rights restrictions placed on people with mental disorders.[263] The Chain-Free Initiative is used in homes and hospitals.[264] In homes, the initiative involves training family members on a realistic and recovery-oriented approach and administering home visits.[265] In hospital facilities, focus is given to educating staff on human rights issues and more humane methods of restraining patients.[266]

Beyond the Chain-Free Initiative, WHO has conducted 3-month long training courses for health workers in Somalia, with the goal of equipping health care providers with knowledge and skills to provide mental health care while taking resource restraints into account.[267] WHO actively monitors the mental health system in the area using WHO-AIMS, enabling health actors to focus attention on population needs and areas requiring immediate action.[268] While a lack of centralized governance remains a challenge for full mental health reform, initiatives taken by WHO and other international actors have raised awareness among national and local partners and provided more stable infrastructure, which in turn helps governments to develop a national mental health policy.[269]

Improving Inter-Agency Coordination During Protracted Crises

In a protracted crisis, where ongoing assistance may be necessary after the initial onset of the emergency, coordinating between appropriate partners and agencies to provide necessary aid is a critical task.[270] WHO is a full member of the Inter-Agency Standing Committee (IASC), the primary mechanism within the UN system for inter-agency coordination of humanitarian assistance in response to major and complex emergencies.[271] The IASC has issued the *Guidelines on Mental Health and Psychosocial Support in Emergency Settings* (2007)*,* a set of guidelines used to allow humanitarian actors and affected communities to plan, establish, and coordinate multi-sectoral responses to protect and improve the mental health of emergency-stricken populations.[272] The guidelines promote the need for particular kinds of responses given the context of the emergency situation.[273] The guide addresses three primary modes of response: emergency preparedness, primarily to be taken as preventative measures; minimum response, which are interventions to be conducted in the midst of emergencies; and comprehensive

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[256] Ibid.
[257] Ibid.
[258] Ibid.
[259] Ibid.
[260] Ibid., p. 70.
[261] Ibid., p. 70.
[262] Ibid., p. 70.
[263] Ibid., p. 70.
[264] WHO, *Chain-free initiative*, 2018.
[265] Ibid.
[266] Ibid.
[267] WHO, *Building Back Better: Sustainable Mental Health Care after Emergencies*, 2013, p. 70.
[268] Ibid., p. 73.
[269] Ibid., p. 72.
[270] IASC, *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, 2007, p. 8.
[271] IASC, *IASC Membership*, 2018.
[272] IASC, *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, 2007, p. 8.
[273] Ibid.

response, which are implemented during the early reconstruction period following an emergency.[274] While the guide emphasizes minimum response efforts meant to be carried out during the climax of an emergency, the inclusion of comprehensive response measures to supplement their minimum counterparts can be applied to the prolonged nature of a protracted emergency.[275] The IASC report, *A Common Monitoring and Evaluation Framework for Mental Health and Psychosocial Support in Emergency Settings* (2017) was released to complement the IASC Guidelines.[276] The framework provides further guidelines for monitoring and evaluation in order to ensure operations following IASC Guidelines are achieving desired results.[277] These include efforts as basic as standardizing terminology to ensuring ethical considerations and promoting result-sharing.[278] Appropriate M&E is critical to determine whether or not a program or intervention measure is achieving its goals.[279] WHO has primarily used M&E to assess cost effectiveness of mental health assistance, with a lack of comparative analysis of the cost effectiveness of any humanitarian assistance being identified as an important gap.[280]

The Sphere Project has developed the *Humanitarian Charter and Minimum Standards in Humanitarian Response* to reflect the work of multi-sectoral humanitarian agencies to improve the effectiveness of their assistance.[281] The *Sphere Standards in Protracted Crises* evaluate the contributions and limitations of the Sphere Humanitarian Charter through the context of protracted emergencies.[282] For example, the Sphere Standards have been widely used in the Democratic Republic of the Congo, a country undergoing a 20-year protracted crisis.[283] The standards have served to guide all humanitarian activities in the area, and through their implementation workers have found recovery opportunities unique to protracted crises.[284] In areas with substantial humanitarian work already taking place, including the public health sector, projects are easier to plan and evaluate.[285] Additionally, building local capacity as a part of delivering assistance has shown to be an opportunity to address a lack of resources.[286]

Conclusion

WHO estimates that as many as one in four individuals globally suffer from a mental disorder.[287] Ensuring the right to health for all people, particularly to vulnerable groups, including those affected by protracted conflict and other emergency situations, is necessarily in order to fully achieve SDG 3, and to work toward the attainment of SDGs 9, 11, and 13.[288] Due to the special nature of protracted crises in contrast to acute emergencies, major obstacles arise when providing adequate mental health services for affected populations.[289] These include the deterioration of health-care facilities, lack of qualified health-care workers, and dissolutions of institutions necessary for maintaining public health.[290] Member States, UN agencies, and relevant international humanitarian organizations should continue to partner with WHO to coordinate the international health response to provide effective relief and recovery to populations impacted by emergency situations.[291]

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[274] Ibid., p. 21.
[275] Ibid., pp. 22-26.
[276] IASC, *A Common Monitoring and Evaluation Framework for Mental Health and Psychosocial Support in Emergency Settings*, 2017, p. 1.
[277] Ibid.
[278] Ibid., p. 3.
[279] Ibid., p. 7.
[280] Ibid., p. 8.
[281] Sphere Project, *Humanitarian Charter and Minimum Standards in Humanitarian Response*.
[282] Sphere Project, *Research recommends more attention to protracted crises in revised Sphere standards*, 2018.
[283] Ibid.
[284] Ibid.
[285] Ibid.
[286] Ibid.
[287] WHO, *Nations for Mental Health*, 2002, p. 3.
[288] WHO, *WHO says address protracted emergencies to achieve Sustainable Development Goals*, 2018.
[289] FAO, *The State of Food Insecurity in the World: Addressing food insecurity in protracted crises*, 2010, p. 12.
[290] Ibid.
[291] WHO, *WHO's new Health Emergencies Programme*, 2016.

Further Research

When continuing their research, delegates should bear in mind the specific challenges that protracted crises pose regarding maintaining necessary infrastructure and support for the provision of community-based mental health services. How can social and cultural barriers be overcome in addressing mental health? How can the departments of HEP be effectively used to address mental health and psychological well-being in protracted crises? In what ways can efforts from outside organizations and agencies such as the Sphere Project be greater integrated into UN efforts? How can WHO, IASC, and other relevant agencies ensure appropriate inter-agency coordination during a protracted emergency? How can efforts toward long-term action and resilience building in the mental health sector be improved without negating the impact of immediate aid?

Annotated Bibliography

Food and Agriculture Organization of the United Nations. (2010). *The State of Food Insecurity in the World: Addressing food insecurity in protracted crises* [Report]. Retrieved 4 July 2018 from: http://www.fao.org/docrep/013/i1683e/i1683e.pdf

> *The 2010 edition of the FAO's annual* State of Food Insecurity in the World *focuses on protracted crises, with chapter II of the report outlining their specific nature. The chapter provides characteristics unique to protracted crises, including longevity, weak governance, and conflict. It further offers a quantitative basis by which to measure whether a country is experiencing a protracted crisis. The chapter also assesses linkages between humanitarian aid and protracted crises and explains the differences between aid in protracted situations versus acute disasters. Delegates will find this source particularly useful when determining the needs of areas experiencing a protracted humanitarian crisis.*

Inter-Agency Standing Committee. (2007). *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings* [Report]. Retrieved 4 July 2018 from: http://www.who.int/mental_health/emergencies/guidelines_iasc_mental_health_psychosocial_june_2007.pdf

> *The* IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings *were released to address identified gaps concerning protecting and improving the mental health of victims of emergencies. The guidelines are meant for health care providers and seek to implement the six core principles of humanitarian response: human rights and equity; participation; do no harm; building on available resources and capacities; integrated support systems; and multi-layered supports. The guidelines emphasize the importance of social supports in order to protect mental health and are drawn from the input of mental health practitioners worldwide. This source will be helpful to delegates by providing insight into the current methods health care providers are utilizing to assess a variety of mental disorders, which can be used to develop a comprehensive strategy to develop practical mental health support in areas with little resources.*

Inter-Agency Standing Committee. (2017). *A Common Monitoring and Evaluation Framework for Mental Health and Psychosocial Support in Emergency Settings* [Report]. Retrieved 15 August 2018 from: https://interagencystandingcommittee.org/system/files/iasc_common_monitoring_and_evaluation_framework_for_mhpss_programmes_in_emergency_settings_2017.pdf

> *This IASC report serves as a complementary source to the* IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, with a focus on monitoring and evaluating current mental health support programs in place. Monitoring and evaluation in emergency settings uses information to demonstrate any changes that have occurred or any targets that have not been reached regarding the IASC Guidelines, which provide the basis for reevaluating long-term humanitarian goals. This document will be useful to delegates as it operationalizes many targets set out by the IASC Guidelines, providing a realistic model to base further action to establish appropriate mental health support in crisis-stricken areas.*

Sphere Project. (2017). *Sphere Standards in Protracted Crises*. Retrieved 15 August 2018 from: *www.sphereproject.org/download/58f64a0c6f347/*

> *The Sphere Project's* Standards in Protracted Crises *applies the* Sphere Minimum Standards in Humanitarian Response*, and seeks to ensure the safety, dignity, and rights of people affected by disaster or armed conflict. Delegates will find this source useful in identifying the broad range of issues prolonged and protracted emergencies present with regard to providing humanitarian assistance. Further notable factors are provided for identifying protracted crises and separating them from their acute counterparts.*

United Nations, Office for the Coordination of Humanitarian Affairs. (2015). *An end in sight: Multi-year planning to meet and reduce humanitarian needs in protracted crises* [Report]. Retrieved 21 October 2018 from: https://www.unocha.org/sites/unocha/files/An%20end%20in%20sight%20Multi%20Year%20Planning.pdf

> *This UN OCHA report addresses whether the current nature of humanitarian action is fit for the specific needs and risks found in different types of protracted crises. The report emphasizes that protracted crises are becoming increasingly more prevalent, being described as the "new normal" for the humanitarian sector. Delegates will find this report useful in developing strategies to differentiate the unique needs of areas in a protracted crisis compared to their acute counterpart.*

United Nations Office of the High Commissioner for Refugees. (2013). *Operational Guidance: Mental Health & Psychosocial Support Programming for Refugee Operations* [Report]. Retrieved 4 July 2018 from: http://www.unhcr.org/en-us/protection/health/525f94479/operational-guidance-mental-health-psychosocial-support-programming-refugee.html

> *This report, in conjunction with the* IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, provides the basis for the mhGAP Humanitarian Intervention Guide. The document accessibly lists existing strategies and policies implemented by the UNHCR addressing public health in emergency situations, most notably refugee crises. The 10 guiding principles provide an operational basis by which the UNHCR and its partners can provide appropriate mental health and psychosocial support. Each chapter of the report reviews a single principle and practical steps relevant actors can take to ensure their appropriate practice, in addition to providing useful resources for humanitarian practitioners both in and out of the field. Delegates will find this source useful as it focuses on mental health issues in areas experiencing a lack of traditional community structures, which is key to providing assistance in a protracted crisis.*

World Health Organization. (2013). *Building Back Better: Sustainable Mental Health Care after Emergencies* [Report]. Retrieved 5 July 2018 from: http://apps.who.int/iris/bitstream/handle/10665/85377/9789241564571_eng.pdf

> *This WHO report provides best practices for mental health response in emergency and protracted humanitarian situations. Divided into three parts, the first section provides an overview of the possibilities for implementing sustainable mental health services in emergency situations. The following section exemplifies 10 diverse case studies of emergency-affected areas and their efforts in reforming mental health initiatives and providing adequate support to their populations. The concluding section of the report summarizes commonalities noted among the case studies, demonstrating the capacity of relevant humanitarian actors to make substantial progress in addition to providing a basis for successful practices going forward. Delegates will find use from the second section and its provided examples of successful mental health support, in addition to ways countries can transmit immediate humanitarian support into systemic health care reform.*

World Health Organization. (2013). *Comprehensive Mental Health Action Plan 2013-2020* [Report]. Retrieved 4 July 2018 from: http://apps.who.int/iris/bitstream/handle/10665/89966/9789241506021_eng.pdf

The 2013-2020 Action Plan drives WHO's approach toward mental health until 2020, serving as a fundamental resource for global efforts to improve psychological care in public health. The report includes proposed goals and specific objectives they intend to meet, in addition to suggested actions to be taken by the WHO Secretariat, Member States, donors, and international humanitarian organizations. Delegates will find use in the comprehensive strategies being recommended in the field of public mental health. They can also draw from its emphasis on the protection of vulnerable and at-risk groups, including populations affected by emergency situations.

World Health Organization. (2017). *Mental Health Atlas 2017* [Report]. Retrieved 4 July 2018 from: http://apps.who.int/iris/bitstream/handle/10665/272735/9789241514019-eng.pdf?ua=1

The Mental Health Atlas *project published by WHO is a comprehensive resource providing current information on mental health resources and tools to assess and plan mental health services. The Atlas further tracks the progress of the Comprehensive Mental Health Action Plan 2013-2020, presenting data values for the Plan's targets. These include strengthening effective leadership and governance for mental health; providing comprehensive, integrated and responsive mental health and social care services in community-based settings; and implementing strategies for promotion and prevention in mental health-based settings. Delegates will find the Atlas useful as an introductory overview of the current status of mental health resources and the ongoing activity of the WHO, Member States, and other international partners in the field.*

World Health Organization & United Nations Office of the High Commissioner for Refugees. (2015). *mhGAP Humanitarian Intervention Guide (mhGAP-HIG): Clinical management of mental, neurological, and substance use conditions in humanitarian emergencies* [Report]. Retrieved 4 July 2018 from: http://apps.who.int/iris/bitstream/handle/10665/162960/9789241548922_eng.pdf

The mhGAP-HIG was released by WHO in response to the growing number of humanitarian emergencies resulting from armed conflict and natural disasters and the broad range of mental problems to those impacted. Building on the IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings and the UNHCR Operational Guidance for Mental Health and Psychosocial Support in Refugee Operations, the mhGAP-HIG stresses a multi-sectoral effort toward addressing the psychological consequences of humanitarian emergencies. The General Principles of Care for People with Mental, Neurological, and Substance Use Conditions (GPC), will provide delegates with a comprehensive overview of the broad scope of multi-sectoral strategies currently being used to assess a multitude of conditions, which can subsequently be developed upon.

Bibliography

Food and Agriculture Organization of the United Nations. (2010). *The State of Food Insecurity in the World: Addressing food insecurity in Protracted Crises* [Report]. Retrieved 15 August 2018 from: http://www.fao.org/docrep/013/i1683e/i1683e.pdf

Food and Agriculture Organization of the United Nations. (2018). *Building resilience in protracted crises* [Website]. Retrieved 15 August 2018 from: http://www.fao.org/resilience/areas-of-work/protracted-crisis/en/

Inter-Agency Standing Committee. (2007). *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*. Retrieved 15 August 2018 from: http://www.who.int/mental_health/emergencies/guidelines_iasc_mental_health_psychosocial_june_2007.pdf

Inter-Agency Standing Committee. (2017). *A Common Monitoring and Evaluation Framework for Mental Health and Psychosocial Support in Emergency Settings*. Retrieved 15 August 2018 from:

https://interagencystandingcommittee.org/system/files/iasc_common_monitoring_and_evaluation_framework_for_mhpss_programmes_in_emergency_settings_2017.pdf

Inter-Agency Standing Committee. (2018). *IASC Membership* [Website]. Retrieved 18 September 2018 from: https://interagencystandingcommittee.org/iasc/membership-and-structure

International Committee of the Red Cross. (2016). *Protracted Conflict and Humanitarian Action: Some Recent ICRC Experiences*. Retrieved 15 August 2018 from: https://www.icrc.org/en/document/protracted-conflict-and-humanitarian-action

Mental Health Innovation. (2013). *Operational Guidance on Mental Health & Psychosocial Support Programming for Refugee Operations*. Retrieved 21 October 2018 from: http://www.mhinnovation.net/resources/operational-guidance-mental-health-psychosocial-support-programming-refugee-operations

Office of the United Nations High Commissioner for Refugees. (2013). *Operational Guidance: Mental Health & Psychosocial Support Programming for Refugee Operations* [Report]. Retrieved 4 July 2018 from: http://www.unhcr.org/en-us/protection/health/525f94479/operational-guidance-mental-health-psychosocial-support-programming-refugee.html

ReliefWeb. (2008). *Glossary of Humanitarian Terms*. Retrieved 21 October 2018 from: https://reliefweb.int/sites/reliefweb.int/files/resources/4F99A3C28EC37D0EC12574A4002E89B4-reliefweb_aug2008.pdf

Sphere Project. (2011). *Humanitarian Charter and Minimum Standards in Humanitarian Response*. Retrieved 15 August 2018 from: http://www.sphereproject.org/handbook/

Sphere Project. (2017, April 19). *Research recommends more attention to protracted crises in revised Sphere standards.* Retrieved 18 September 2018 from: http://www.sphereproject.org/blog/sphere-standards-and-protracted-humanitarian-crises/

Sphere Project. (2017). *Sphere Standards in Protracted Crises*. Retrieved 15 August 2018 from: www.sphereproject.org/download/58f64a0c6f347/

Sphere Project. (2018). *How to use this chapter* [Website]. Retrieved 18 September 2018 from: http://www.spherehandbook.org/en/how-to-use-this-chapter/

United Nations, Department of Economic and Social Affairs. (2018). *Sustainable Development Goal 3: Ensure healthy lives and promote well-being for all at all ages*. [Website]. Retrieved 29 October 2018 from: https://sustainabledevelopment.un.org/sdg3

United Nations, General Assembly, Third session. (1947). *Universal Declaration of Human Rights* (A/RES/217 A (III)). Retrieved 15 August 2018 from: http://www.un.org/en/documents/udhr/

United Nations, General Assembly, Twentieth session. (1965). *International Convention on the Elimination of All Forms of Racial Discrimination (A/RES/2106 (XX)).* Adopted on the report of the Third Committee (A/6120 and A/L472). Retrieved 15 August 2018 from: http://undocs.org/A/RES/2037(XX)

United Nations, General Assembly, Twenty-first session (1966). *International Covenant on Civil and Political Rights (A/RES/2200 (XXI))*. Adopted on the report of the Third Committee. Retrieved 15 August 2018 from: http://undocs.org/A/RES/2200(XXI)

United Nations, General Assembly, Thirty-fourth session. (1979). *Convention on the Elimination of All Forms of Discrimination against Women (A/RES/34/180)* [Resolution]. Adopted on the report of the Third Committee (A/34/783). Retrieved 15 August 2018 from: http://undocs.org/A/RES/54/4

United Nations, General Assembly, Forty-fourth session. (1989). *Convention on the Rights of the Child (A/RES/44/25).* Adopted on the report of the Third Committee (A/45/753). Retrieved 15 August 2018 from: http://undocs.org/A/RES/1386(XIV)

United Nations, General Assembly, Sixty-ninth session. (2015). *Sendai Declaration and Framework for Disaster Risk Reduction 2015-2030 (A.RES/69/283).* Retrieved 15 August 2018 from: http://undocs.org/A/RES/69/283

United Nations, General Assembly, Seventieth session. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)* [Resolution]. Retrieved 15 August 2018 from: http://undocs.org/A/RES/70/1

United Nations, Human Rights Council, Thirty-fourth session. (2017). *Mental Health and Human Rights: Report of the United Nations High Commissioner for Human Rights (A/HRC/34/32).* Retrieved 21 October 2018 from: https://globalmentalhealth.org/sites/default/files/G1702132.pdf

United Nations University et al. (2015). *Mental Health, Well-being and Disability- A New Global Priority Key United Nations Resolutions and Documents*. Retrieved 23 August 2018 from: http://pubdocs.worldbank.org/en/619761454942779225/Mental-Health-Well-being-Disability-A-New-Global-Priority.pdf

World Health Organization. (2002). *Nations for Mental Health* [Report]. Retrieved 21 October 2018 from: http://www.who.int/mental_health/media/en/400.pdf

World Health Organization. (2008). *Mental Health Gap Action Programme: Scaling up care for mental, neurological, and substance use disorders* [Report]. Retrieved 15 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/43809/9789241596206_eng.pdf

World Health Organization. (2010). *mhGAP Intervention Guide for mental, neurological, and substance use disorders in non-specialized health settings*. Retrieved 15 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/44406/9789241548069_eng.pdf

World Health Organization. (2013). *Building Back Better: Sustainable Mental Health Care after Emergencies* [Report]. Retrieved 15 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/85377/9789241564571_eng.pdf

World Health Organization. (2013). *Comprehensive Mental Health Action Plan 2013-2020* [Report]. Retrieved 15 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/89966/9789241506021_eng.pdf

World Health Organization. (2016). *WHO's new Health Emergencies Programme* [Website]. Retrieved 15 August 2018 from: http://www.who.int/features/qa/health-emergencies-programme/en/

World Health Organization. (2017). *Mental Health Atlas 2017* [Report]. Retrieved 4 July 2018 from: http://apps.who.int/iris/bitstream/handle/10665/272735/9789241514019-eng.pdf?ua=1

World Health Organization. (2018). *Chain-free initiative* [Website]. Retrieved 18 September 2018 from: http://www.emro.who.int/mental-health/chain-free-initiative/

World Health Organization. (2018). *Complex emergencies* [Website]. Retrieved 18 September 2018 from: http://www.who.int/environmental_health_emergencies/complex_emergencies/en/

World Health Organization. (2018). *Mental Health: a state of well-being* [Website]. Retrieved 15 August 2018 from: http://www.who.int/features/factfiles/mental_health/en/

World Health Organization. (2018). *Mental health evidence and research (MER)* [Website]. Retrieved 15 August 2018 from: http://www.who.int/mental_health/evidence/en/

World Health Organization. (2018). *mhGAP Evidence Resource Centre* [Website]. Retrieved 15 August 2018 from: http://www.who.int/mental_health/mhgap/evidence/en/

World Health Organization. (2018). *Placing health at the heart of humanitarian action* [Website]. Retrieved 15 August 2018 from: http://www.who.int/hac/events/2015/worldhumanitariansummit_/en/

World Health Organization. (2018). *What we do* [Website]. Retrieved 29 October 2018 from: http://www.who.int/about/what-we-do/en/

World Health Organization. (2018). *WHO says address protracted emergencies to achieve Sustainable Development Goals* [Website]. Retrieved 15 August 2018 from: http://www.who.int/hac/crises/ssd/releases/who_suistainable_development_goals/en/

World Health Organization & the Office of the United Nations High Commissioner for Refugees. (2015). *mhGAP Humanitarian Intervention Guide (mhGAP-HIG): Clinical management of mental, neurological, and substance use conditions in humanitarian emergencies* [Report]. Retrieved 15 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/162960/9789241548922_eng.pdf

World Health Organization, World Health Assembly. (1946). *Constitution of the World Health Organization.* Retrieved 15 August 2018 from https://archive.org/details/WHO-constitution

World Health Organization, World Health Assembly. (2011). *Strengthening national health emergency and disaster management capacities (WHA64.10)* [Resolution]. Retrieved 25 October 2018 from: http://apps.who.int/iris/bitstream/handle/10665/3566/A64_R10-en.pdf

World Health Organization, World Health Assembly. (2012) *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)* [Resolution]. Retrieved 15 August 2018 from: http://www.who.int/mental_health/WHA65.4_resolution.pdf

III. Strengthening Global Resilience Against Outbreaks and Epidemics

Introduction

Every month, the World Health Organization (WHO) encounters 5,000 or more disease outbreak indications globally, where about 300 of them require further investigation to determine the severity of the epidemic's threat to global health.[292] According to WHO, an epidemic is described as an "occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy."[293] Furthermore, if an epidemic involves several states or continents, it becomes a pandemic, and, if it recurs regularly in one area due to favorable conditions, it can be described as endemic.[294] Additionally, it is important to identify that an outbreak is "the occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area or season," and therefore similarities exist between the concepts of an epidemic and an outbreak.[295]

Over the course of history, there have been different outbreaks and epidemics that often had disastrous consequences, but also taught the international community valuable lessons on how to manage and create resilience against such diseases.[296] Smallpox has been one of the first recorded infections that affected large populations of people.[297] The next large-scale epidemics were the different forms of plague, which started to widespread in the 5th century and since then continued to effect large parts of the world.[298] In the 14th century, Europe lost about 25 million people only because of this disease.[299] After the end of World War I, between 1918 and 1919, the influenza, or commonly known as the Spanish flu, is estimated to have killed between 30 and 50 million people.[300] Other notable epidemics and outbreaks over the course of history have been the yellow fever, polio, HIV/AIDS, SARS, and swine flu.[301] As one of the most recent epidemics, the Ebola virus disease (EVD) peak outbreak occurred between 2014 and 2016 with most of the cases being in Central and West Africa.[302] The most recent statistics from September 2018 state that there have been a total of 140 cases of the disease in Democratic Republic of Congo (DRC), resulting in 94 fatalities and indicating that the epidemic is still ongoing.[303] WHO is conducting various activities to manage and respond to this and other outbreaks.[304]

Despite the historic outlook and the ability to overcome all epidemics, the international community still faces challenges in terms of building resilience against these outbreaks.[305] Resilience is defined as the "capacity to recover quickly from difficulties," and, in the epidemics context, it means the strengthening of capabilities of health institutions, health-care workers, and local communities to deal with health risks, as well as quick response in emergencies to provide medications and health services in a timely manner.[306] The following sections will address the fundamental frameworks surrounding the strengthening of resilience against outbreaks and epidemics, along with the role of United Nations (UN) bodies, non-governmental organizations (NGOs), and other entities in this regard.[307] Next, the short- as well as long-term responses to health emergency crises and related resilience development solutions will be

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[292] Candeias & Morhard, *How epidemics infect the global economy and what to do about it*, 2018.
[293] WHO, *Definitions: emergencies*, 2018.
[294] Cambridge Dictionary, *Endemic*; Oxford University Press, *Pandemic*, 2018.
[295] WHO SEARO, *Disease outbreaks*, 2018.
[296] History of Vaccines, *All Timelines Overview*, 2018.
[297] Ibid.
[298] Hays, *Epidemics and Pandemics: Their Impacts on Human History*, 2005.
[299] Ibid.
[300] WHO, *Influenza*, 2018.
[301] Hays, *Epidemics and Pandemics: Their Impacts on Human History*, 2005.
[302] WHO, *Ebola Virus Disease*, 2018.
[303] WHO, *Ebola virus disease: Ebola situation reports: Democratic Republic of the Congo*, 2018.
[304] Ibid.
[305] History of Vaccines, *All Timelines Overview*, 2018; WHO, *Anticipating Emerging Infectious Disease Epidemics*, 2015.
[306] Oxford University Press, *Resilience*, 2018; WHO, *Building Resilience of Health Systems in Pacific Island LDCs to Climate Change*, 2018.
[307] WHO, *Disease outbreaks*, 2018; WHO, *Emergencies: How we work*, 2018.

discussed.[308] Lastly, the example of the Ebola outbreak in 2014 will be used to understand the successes, failures, and challenges in striving to strengthen resilience against global outbreaks and epidemics.[309]

International and Regional Framework

The right to health was first introduced in the 1946 *Constitution of the World Health Organization*, which defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."[310] The 1946 constitution recognizes as one of the functions of WHO to "establish and maintain epidemiological and statistical services" as well as to "stimulate and advance work to eradicate epidemic, endemic and other diseases."[311] Article 25 of the *Universal Declaration of Human Rights* (1948) also states that "everyone has the right to a standard of living adequate for the health and well-being of himself and of his family," underlying the importance of having health-care access as a universal right to every human being.[312] Equitable access to health facilities, goods, and services becomes essential especially during outbreaks and epidemics.[313]

In 1966, the UN General Assembly adopted the *International Covenant on Economic, Social and Cultural Rights* (ICESCR), which represented another step towards providing universal access to health-care to everyone.[314] Of particular importance is Article 12, which states that "the States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health."[315] Furthermore, Section 2 (c) suggests that the full realization of this right can only be achieved through effective steps aiming at the "prevention, treatment and control of epidemic, endemic, occupational and other diseases."[316]

Throughout the UN system, various agencies and organizational bodies have issued resolutions that address the topics of epidemics, disease outbreaks, and other health-related crisis.[317] The World Health Assembly (WHA), which is the decision-making body of WHO, issued resolution 54.14 of 2011 on "Global Health Security: Epidemic Alert and Response" and resolution 51.17 of 1998 on "Emerging and other communicable diseases: antimicrobial resistance."[318] These resolutions call upon Member States to take action on preventative, control, and mitigation activities regarding epidemics and outbreaks.[319] In addition, they ask the Director-General of WHO to support all Member States with the necessary tools and information to achieve favorable outcomes in regions affected by epidemics and disease outbreaks.[320]

In September 2015, the General Assembly adopted the *2030 Agenda for Sustainable Development* (2030 Agenda), which set 17 Sustainable Development Goals (SDGs) crucial for the advancement of the international efforts toward sustainable development in various areas.[321] SDG 3 is specifically oriented toward global responsibility to ensure healthy lives and promote well-being among all people.[322] Its target

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[308] WHO, *Emergencies: How we work*, 2018.
[309] Kekulé, *Learning from Ebola Virus: How to Prevent Future Epidemics*, 2015.
[310] WHO, *Constitution of the World Health Organization*, 1946.
[311] Ibid.
[312] UN General Assembly, *Universal Declaration of Human Rights (A/RES/217 A (III))*, 1948.
[313] WHO, *Emergencies: How we work*, 2018.
[314] UN General Assembly, *International Covenant on Economic, Social and Cultural Rights*, 1966.
[315] Ibid.
[316] Ibid.
[317] UN DPI, *Global Issues: Health*, 2018.
[318] WHO, *Emerging and other communicable diseases: antimicrobial resistance (WHA51.17)*, 1998; WHO, *Global health security: epidemic alert and response (WHA54.14)*, 2001.
[319] Ibid.
[320] Ibid.
[321] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[322] Ibid.

3.3 focuses on ending epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases, and the fight against other communicable diseases.[323]

Contrary to the SDGs, the *International Health Regulations* (IHR), which were adopted by the WHA in May 2005, are a legally binding instrument of the international law, currently binding 196 Member States including all WHO members.[324] The main purpose of the IHR is to provide an international legal framework to help states globally to address various epidemics that have the possibility to spread and impact people across borders.[325] The IHR require all states to inform WHO on the state of epidemics, outbreaks, and other health risks within their regions.[326] This has become a crucial aspect of the IHR also due to the increasing migration and mobility of people worldwide.[327] Diseases know no boundaries and, in order to limit their spread, the international community has recognized the importance of partnerships and relying on systematic actions that the IHR have provided.[328] The IHR have also set up multiple emergency committees on various ongoing disease outbreaks, including the IHR Emergency Committee on Ebola and the IHR Emergency Committee on Zika virus.[329] These emergency committees consist of advisors, researchers, and other relevant experts on the specific disease or geographic area, enabling exchange of valuable technical expertise as well as pooling of know-how and other resources.[330]

Role of the International System

The international system regarding building resilience toward epidemics and disease outbreaks is built around WHO as the central, governing organization in this field.[331] WHO's main purpose is to guide and organize efforts promoting health and universal well-being rights not only within the UN framework but also internationally.[332] Regarding communicable diseases, WHO works closely with states affected by disease outbreaks by undertaking risk assessments; identifying priorities and setting strategies; providing critical technical guidance, medical supplies, and financial resources; as well as monitoring the health situation and helping them increase the availability of treatment.[333] WHO also supports the affected states in developing long-term emergency response strategies that would allow them to react to disease outbreaks timely and effectively.[334]

In order to successfully fulfill its functions related to epidemics and disease outbreaks, WHO has created several initiatives.[335] First and foremost, the Emerging and Dangerous Pathogens Laboratory Network (EDPLN) includes global and regional networks of diagnostic laboratories for detecting pathogens in both humans and animals.[336] This initiative allows for the detection of various pathogens possessing an epidemic potential, and thereby serves as a preparedness tool with regard to future outbreaks.[337] Equally important is the Global Infection Prevention and Control (GIPC) Network, which is a practical and science-based initiative providing hygiene standards and procedures to be followed when interacting with patients.[338] This initiative helps develop resilience against outbreaks and control the spread of diseases.[339] Furthermore, Global Influenza Surveillance and Response System (GISRS) is an initiative that observes the development of influenza viruses, and offers support to those geographic

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[323] Ibid.
[324] WHO, *International Health Regulations*, 2005.
[325] Ibid.
[326] Ibid.
[327] Ibid.
[328] Ibid.
[329] Ibid.
[330] Ibid.
[331] WHO, *What we do*, 2018.
[332] Ibid.
[333] Ibid.
[334] Ibid.
[335] WHO, *Disease outbreaks*, 2018.
[336] WHO, *WHO Emerging and Dangerous Pathogens Laboratory Network (EDPLN)*, 2018.
[337] Ibid.
[338] WHO, *Infection prevention and control in health care*, 2018.
[339] Ibid.

areas affected by outbreaks through providing vaccines, laboratory diagnostics, risk assessment, and other supportive elements.[340] Similarly, the Pandemic Influenza Preparedness (PIP) framework helps Member States, WHO, and other stakeholders increase their readiness with regard to influenza outbreaks on a pandemic level.[341] One of its main goals is to help developing countries access vaccines and other treatment supplies.[342] Lastly, Emerging Diseases Clinical Assessment and Response Network (EDCARN) is an initiative providing technical expertise and operational activities regarding treatment, prevention, and research on emerging diseases, which serves to support Member States with resilience development.[343]

The General Assembly, acting as a central policymaking and representative UN body, contributes not only to the creation of general policy frameworks, but also adopts resolutions in reaction to concrete outbreaks.[344] One such example is resolution 69/1 of 2014, which supported the Secretary-General's intent to create the UN Mission for Ebola Emergency Response (UNMEER).[345] Resolutions in reaction to outbreaks and epidemics are also often issued by the Security Council.[346] Resolution 2177 of 2014 on "Peace and Security in Africa" recognized the Ebola outbreak in Africa as a threat to global security, and resolution 1983 of 2011 on "HIV epidemic" recognized the scale of the HIV/AIDS epidemic as a threat to international peace and security.[347]

International NGOs that are profoundly embedded into the international health system strongly support the strengthening of resilience in areas affected by epidemics, disease outbreaks, and other health crises.[348] Médecins Sans Frontières (MSF) is an international medical humanitarian organization, whose main aim is to provide health-care and medical support to communities and individuals affected by emergencies and epidemic outbreaks, especially those lacking access to health-care.[349] In terms of resilience development to epidemics and outbreaks, MSF prioritizes raising awareness among the affected communities and strengthening of political will to offer global support to those most affected.[350]

WHO conducts most of their actions regarding epidemics and disease outbreaks in cooperation with other partners, both UN agencies and non-UN actors.[351] WHO recognized the necessity of having a reliable and diverse partnership system for being able to share resources and knowledge to build resilience strategies and to effectively and efficiently respond to the wide diversity of emergencies and health crises worldwide.[352] In addition to WHO initiatives such as EDPLN, GIPCN, GISRS, PIP, and EDCARN, the organization has established additional partnerships that allow it to scale up its actions and be flexible in supporting resilience development activities.[353] The Global Health Cluster (GHC) is a platform of more than 700 partnerships that are capable, on both local and global scale, of responding to health crises worldwide.[354] Currently, 27 states have active Health Clusters that are helping more than 75 million people by coordinating technical, operative, and other supportive tasks in response to health

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[340] WHO, *Global Influenza Surveillance and Response System (GISRS)*, 2018.
[341] WHO, *Pandemic Influenza Preparedness (PIP) Framework*, 2018.
[342] Ibid.
[343] WHO, *The WHO Emerging Diseases Clinical Assessment and Response Network (EDCARN)*, 2018.
[344] UN General Assembly, *Functions and powers of the General Assembly*, 2018; UN General Assembly, *Measures to contain and combat the recent Ebola outbreak in West Africa Resolution (A/RES/69/1)*, 2014.
[345] UN General Assembly, *Measures to contain and combat the recent Ebola outbreak in West Africa Resolution (A/RES/69/1)*, 2014.
[346] UN Security Council, *Peace and security in Africa (S/RES/2177)*, 2014.
[347] UN Security Council, *Maintenance of international peace and security (S/RES/1983)*, 2011; UN Security Council, *Peace and security in Africa (S/RES/2177)*, 2014.
[348] UNICEF, *Emergency aid and long-term solutions meet cholera outbreak in northern Cameroon*, 2010.
[349] Médecins Sans Frontières, *Who we are*, 2018.
[350] Médecins Sans Frontières, *Epidemics and Pandemics*, 2018.
[351] WHO, *How WHO works with other UN agencies*, 2018.
[352] WHO, *Questions and answers about WHO's role in Humanitarian Health Action*, 2018.
[353] WHO, *Working with partners in health emergencies*, 2018.
[354] WHO, *Health Cluster: About us*, 2018.

emergencies.[355] WHO is the leading agency of the GHC.[356] Standby Partnerships, consisting of experienced health-care and administrative experts, technicians, and other operative personnel, are or crucial importance in emergency situations when additional personnel needs to be deployed to the crisis locations to support WHO and the Health Cluster in their emergency response.[357]

Long-Term Response: Resilience as a Prevention

Past and present epidemic and disease outbreaks have provided a foundation for WHO, other UN entities, NGOs, governments, and other stakeholders to create action plans that allow them to prevent and respond to such crises more effectively, including by strengthening the resilience of national health systems and local communities.[358] One long-term solution comes from the lessons learned during the cholera outbreak in Cameroon in 2010.[359] In reaction to this crisis, the United Nations Children's Fund (UNICEF) has suggested the use of an innovative methodology called Community-Led Total Sanitation (CLTS), which aims at eliminating open defecation and improving sanitation within the areas affected by epidemics and outbreaks.[360] This approach sees the CLTS committee working together with local communities on building necessary hygiene infrastructure, as well as informing and educating people on the importance of proper sanitation to avoid further disease spread.[361] Such a simple yet effective community-driven approach can teach local communities to take responsibility themselves for keeping a disease isolated in the long run.[362] However, the CLTS also faces certain challenges that have slowed down the progress of distribution of this tool.[363] Those challenges mostly originate from prevailing cultural norms and traditional living styles, which must be considered in order for an effective CLTS approach.[364] In some cultures, it is not a practice to have sanitary facilities near homes, or certain relatives are not allowed to use the same facilities.[365] Moreover, a recent study shows that in Zambia, unmarried women are having difficulties to have a latrine built because the cultural norms consider it as a man's duty.[366] Another challenge is the suitability and durability of such facilities.[367] Natural and ecological risks, such as flooding, ground water contamination, or soil erosion, pose risks to the resilience and sustainability of CLTS facilities.[368]

WHO has also suggested the use of predictive modeling to predict future outbreaks.[369] This technology creates linkages between historic evidence of occurrence of disease outbreaks and climatic conditions variability, which allows to predict the expected burden of epidemics and disease outbreaks under certain climate change scenarios.[370] Predictive modeling is a relatively new concept, still being developed as a global epidemics and disease outbreaks resilience strengthening practice, and it is predicted that this method would provide more accurate results throughout time with the advance of technology.[371] A leading challenge to this method is that different models can lead to the same outcome in one context, which may not be true in another context, thus undermining the reliability of the predictive modeling technology.[372]

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[355] Ibid.
[356] Ibid.
[357] WHO, *WHO Standby partnerships*, 2018.
[358] WHO, *Questions and answers about WHO's role in Humanitarian Health Action*, 2018.
[359] UNICEF, *Emergency aid and long-term solutions meet cholera outbreak in northern Cameroon*, 2010.
[360] Ibid.
[361] Ibid.
[362] Ibid.
[363] Movik et al., *Community-Led Total Sanitation (CLTS): Challenges and opportunities*, 2010.
[364] Ibid.
[365] Ibid.
[366] Thys et al., *Why Latrines Are Not Used: Communities' Perceptions and Practices Regarding Latrines in a Taenia solium Endemic Rural Area in Eastern Zambia*, 2015.
[367] Movik et al., *Community-Led Total Sanitation (CLTS): Challenges and opportunities*, 2010.
[368] Ibid.
[369] Huppert & Katriel, *Mathematical modelling and prediction in infectious disease epidemiology*, 2013.
[370] WHO, *Climate change and human health - risks and responses. Summary*, 2018.
[371] Huppert & Katriel, *Mathematical modelling and prediction in infectious disease epidemiology*, 2013.
[372] Ibid.

In crisis situations, it is crucial to have well-trained medical and technical personnel, volunteers, and other actors that are involved in the emergency risk management cycle.[373] Training in various specialties, such as logistics, social care, and communication, allows the personnel to be more effective and efficient when it comes to dealing with an emergency and having it under control as soon as possible.[374] For this purpose, in 2017, WHO set up the Training Task Team, which assembles coordinators of learning and training activities for personnel in the WHO headquarters and in all regional and country offices to prepare them for their involvement in emergencies.[375] Additionally, WHO has established a Task Force on Education and Training, whose primary goal is to support Member States by providing training and educational activities to local health-care workers.[376] Training and learning as a resilience strengthening practice can be improved by having more volunteers involved in the Training Task Team, enhancing the use of technology in trainings, increasing the availability of training in different languages, as well as scaling up trainings to real-life large emergencies.[377]

One of the most sustainable approaches to building global resilience toward epidemics and disease outbreaks is through the promotion of education for communities and people in affected areas.[378] Among the main reasons why Ebola outbreak in 2014-2016 in West Africa spread so quickly was a lack of information on how people should react to the situation and protect themselves.[379] WHO has recognized the challenge of lacking information, and has therefore been utilizing tools such as OpenWHO, an online learning platform, and Risk Communication, which serves the exchange of vital information during a disease outbreak situation.[380] Progress in this area has been stagnating due to long-time duration and high costs associated with implementing such effective educational tools.[381]

Short-Term Response: Immediate Reaction

Short-term responses to outbreaks require immediate action to limit the further spread of epidemics and other diseases.[382] Vaccination was among the first reactions to preventing the emergence and further spread of epidemics and disease outbreaks.[383] The International Coordinating Group (ICG) on Vaccine Provision, which was set up in 1997, provides emergency vaccine supplies and antibiotics to states suffering from disease outbreaks.[384] The ICG's primary purpose is rapid deployment of vaccines to outbreak areas, but it also helps coordinate efforts on epidemic preparedness and response.[385] The ICG provides vaccines for various diseases such as cholera, meningitis, and yellow fewer.[386]

Another actor focusing on short-term response to outbreaks and epidemics is the WHO unit on Disease Control in Humanitarian Emergencies (DCE), whose main purpose is to reduce mortality and morbidity caused by communicable diseases in regions affected by an emergency.[387] The DCE provides operational and technical assistance in field epidemiology, such as surveillance, monitoring, and training.[388] Furthermore, the DCE issues technical standards, guidelines, and tools to be used by experts and health-care practitioners in field.[389] The main purpose of setting standardized instructions is to have

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[373] WHO, *Emergencies: How we work*, 2018.

[374] Ibid.

[375] WHO, *Emergencies: How we work*, 2018; WHO, *Emergency Response Framework*, 2017.

[376] WHO, *Task Force on Education and Training*, 2018.

[377] WHO, *Emergencies: How we work*, 2018.

[378] Kekulé, *Learning from Ebola Virus: How to Prevent Future Epidemics*, 2015.

[379] Ibid.

[380] Ibid.

[381] Ibid.

[382] WHO, *Emergencies: How we work*, 2018.

[383] Hays, *Epidemics and Pandemics: Their Impacts on Human History*, 2005.

[384] WHO, *International Coordinating Group (ICG) on Vaccine Provision*, 2016.

[385] Ibid.

[386] Ibid.

[387] WHO, *Disease Control in Humanitarian Emergencies*, 2018.

[388] Ibid.

[389] Ibid.

effective and coordinated activities toward disease prevention and control.[390] A related challenge to this is keeping the instructions and manuals updated to new diseases so that response actions can be adjusted and implemented accordingly.[391]

Risk communication, which involves an exchange of real-time information between people in health risk situations and experts that can provide them with advice, is considered to be another short-term resilience strengthening solution because it allows people to make informed decisions to protect themselves.[392] Risk communication uses various communication channels, such as social media, mass media, and community engagement.[393] A significant benefit of this approach is that it is flexible and can be applied in any disease outbreak emergency.[394]

Strengthening protection and resilience of health workers is another priority of the UN and WHO that allows for effective short-term response to health emergencies.[395] One of the main areas of focus is providing training to health-care workers that would equip them with knowledge and instructions on how to protect themselves while treating others.[396] In 2018, WHO, together with the International Labour Organization (ILO) released a publication titled *Occupational safety and health in public health emergencies: A manual for protecting health workers and responders*, which instructs health-care workers on how to protect themselves and others during outbreak emergencies.[397]

Nevertheless, short-term responses also face certain challenges, the most serious being a lack of immediate allocation of financial and personal resources.[398] WHO's budget for the fiscal year 2018/2019 is about $4.4 billion, which is the amount dedicated for various health-related activities throughout the world.[399] In comparison, the United States Center for Disease Control had an annual budget of $6 billion in 2018 for a population of 325.7 million people.[400] Moreover, more than half of WHO's budget comes from voluntary donations, which leaves it at risk of not having enough funds.[401] Additionally, the international community is sometimes hindered in their efforts by the inability to recognize a disease outbreak or an epidemic in its early stage.[402] This was the case with the Ebola outbreak in 2014 when the scale of the epidemic was observed relatively late and the disease had already spread.[403] Lacking community engagement and openness to support as well as resentment by local community leaders can present health-care workers with additional challenges.[404]

Case Study: Ebola Outbreak

EVD is a communicable disease that originates from animals and spreads through human-to-human interaction.[405] According to WHO, fatality rate varies between 25% and 90%.[406] EVD outbreaks before 2014 originated mostly from Central Africa, however, the largest number of cases occurred between 2014 and 2016 in West Africa, mostly in Liberia, Sierra Leone, and Guinea.[407] To control and prevent the EVD

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[390] WHO, *Communicable disease control in emergencies: A Field Manual*, 2005.
[391] Ibid.
[392] WHO, *General information on risk communication*, 2018.
[393] Ibid.
[394] Ibid.
[395] WHO, *Ebola outbreak - Protecting health workers is a priority for the WHO*, 2014.
[396] Ibid.
[397] ILO, *Occupational safety and health in public health emergencies: A manual for protecting health workers and responders*, 2018.
[398] WHO, *Key events in the WHO response to the Ebola outbreak*, 2015.
[399] WHO, *About WHO: Budget*, 2018.
[400] United States of America, *Overview of the CDC FY 2018 Budget Request*, 2017.
[401] WHO, *About WHO: Budget*, 2018.
[402] Kekulé, *Learning from Ebola Virus: How to Prevent Future Epidemics*, 2015
[403] Ibid.
[404] WHO, *Community engagement in the Ebola response*, 2018.
[405] WHO, *Ebola Virus Disease*, 2018.
[406] Ibid.
[407] WHO, *Ebola Virus Disease*, 2018; Médecins Sans Frontières, *Epidemics and Pandemics*, 2018.

outbreak from further spreading, WHO alongside its partners practiced several intervention strategies.[408] Specifically, the WHO response to the Ebola outbreak between 2014 and 2016 was divided into three phases.[409] Phase 1 involved the setup of treatment centers, training of health workers teams, and development of mobilization capacities.[410] Phase 2 focused on increasing capacity for case discovering, contact tracing, and community engagement.[411] Lastly, phase 3 aimed at interrupting further transmission of the Ebola virus by identifying all cases, deaths, and people who were in contact with those who died; by establishing and maintaining further health facilities; and by providing incentives for individuals and communities to comply with public health measures.[412] The emergency response also involved awareness raising campaigns advising affected communities to limit contact between animals and humans as well as between Ebola patients and other people; to practice safe sex at least 12 months after successful treatment to lower the risk of sexual transmission, and to conduct safe burial procedures.[413]

One of the major causes of the 2014-2016 EVD breakout and further spread in West Africa was insufficient health systems in the affected states.[414] Many essential health system functions, such as a necessary number of qualified health workers; functioning logistics, infrastructure, and health information surveillance; and sufficient drug supply, were not working.[415] In addition, the governance and management of health services were in weak conditions, and the government spending on health-care was very low.[416] Weak health systems are unable to provide resilient solutions, and investing in the strengthening of national health systems would reduce a state's susceptibility to health risks and provide the necessary level of preparedness to manage an Ebola outbreak or any other epidemics.[417] Besides strong health systems, good-quality education and functioning infrastructure are two crucial elements in ensuring a state's resilience toward outbreaks.[418]

Conclusion

Throughout history, many epidemics and disease outbreaks have left a devastating impact on economies and societies, led to increased migration, and negatively affected many more aspects of life.[419] WHO, as the central body in global health matters, has taken the monumental responsibility to manage outbreaks of epidemics and other health crisis emergencies through short- and long-term resilience strengthening responses.[420] The most important short-term responses that WHO and other actors focus on are the communicable disease control, effective risk communication, the protection of health-care workers, and the provision of vaccines.[421] These solutions provide the necessary immediate response despite frequent challenges related to resource allocation.[422] Regarding long-term responses, community-led sanitation, predictive modeling, training, and education are examples of actions taken towards strengthening resilience of both affected communities and health-care workers against outbreaks and epidemics.[423] In this context, the main underlying challenges are poorly functional health systems and a lack of awareness.[424] Renewed outbreak of EVD in the DRC in 2018 is an indication of the necessity to further improve global resilience toward epidemics and disease outbreaks.[425]

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[408] WHO, *Ebola Virus Disease*, 2018.
[409] WHO, *Ebola and Marburg virus disease epidemics: preparedness, alert, control and evaluation*, 2014.
[410] Ibid.
[411] Ibid.
[412] Ibid.
[413] WHO, *Ebola Virus Disease*, 2018.
[414] Kieny et al., *Health-system resilience: reflections on the Ebola crisis in western Africa*, 2014.
[415] Ibid.
[416] Ibid.
[417] Ibid.
[418] Kekulé*, Learning from Ebola Virus: How to Prevent Future Epidemics*, 2015.
[419] Hays, *Epidemics and Pandemics: Their Impacts on Human History*, 2005.
[420] WHO, *Questions and answers about WHO's role in Humanitarian Health Action*, 2018.
[421] Ibid.
[422] Kekulé*, Learning from Ebola Virus: How to Prevent Future Epidemics*, 2015.
[423] WHO, *Disease outbreaks*, 2018; WHO, *Emergencies: How we work*, 2018.
[424] Kieny et al., *Health-system resilience: reflections on the Ebola crisis in western Africa*, 2014.
[425] Ibid.

Further Research

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

Annotated Bibliography

Kieny, M.-P. et al. (2014). Health-system resilience: reflections on the Ebola crisis in western Africa. *Bulletin of the World Health Organization*, 92 (12): 850. Retrieved 18 September 2018 from: http://doi.org/10.2471/BLT.14.149278
> *This article was published in 2014 in the WHO Bulletin. It reflects on a research conducted by multiple authors on various aspects of Ebola crises in Western Africa, such as capacity of health systems or infrastructure. It also contains suggestions how to handle the crisis in the future. The article highlights the importance of having functional health systems as one of the main resilience building tactics. The article can serve as an inspiration for delegates' additional research regarding the particular epidemics as well as other factors that play role in strengthening resilience of health systems.*

United Nations, General Assembly, Twenty-first session. (1966). *International Covenant on Economic, Social and Cultural Rights (A/RES/2200 (XXI))*. Adopted on the report of the Third Committee. Retrieved 20 July 2018 from: http://undocs.org/A/RES/2200(XXI)
> *The ICESCR, adopted in 1966, is a multilateral treaty that instructs and devotes its parties to work toward providing economic, social, and cultural rights to individuals. It is divided into five parts and 31 articles, each of them focusing on a different topic or implementation of the Covenant. For example, Article 12 is centered around the right to health. The document has been ratified by 168 states and is monitored by the UN Committee on Economic, Social and Cultural Rights (CESCR). The document provides delegates with a detailed insight into the legal aspects of the social, economic, and cultural rights globally.*

United Nations, General Assembly, Sixty-ninth session. (2014). *Measures to contain and combat the recent Ebola outbreak in West Africa Resolution (A/RES/69/1)* [Resolution]. Adopted without reference to a Main Committee (A/69/L.2). Retrieved 6 July 2018 from http://undocs.org/A/RES/69/1
> *The General Assembly resolution 69/1 from 2014 calls for actions to be taken to control and combat the Ebola outbreak in West Africa. This resolution was the necessary starting point to have Ebola outbreak recognized as an emergency on the international level. The resolution suggested three steps of action to be taken at the time it was released: the establishment of UNMEER, followed by the suggestion for the Secretary-General to take necessary actions, and, lastly, an invitation to the Member States and UN bodies to react toward the crisis. This document provides delegates with information on logical reasoning and responses regarding the Ebola outbreak, and serves as a source of better understanding of the WHO position on the crises at their early stages.*

United Nations, Security Council, 6547th Meeting. (2011). *Maintenance of international peace and security (S/RES/1983 (2011))* [Resolution]. Retrieved 6 July 2018 from http://undocs.org/S/RES/1983(2011)
> *In 2011, the UN Security Council adopted resolution 1983 on the topic "Maintenance of international peace and security," which recognizes and emphasizes the global epidemic status of HIV and AIDS. It classifies the scale of this health crisis as a barrier to international development and growth, and calls for action by the Secretary-General to consider HIV-related needs of all people to be taken into account in activities and decision by the UN. Overall, this resolution provides the UN standpoint on the HIV/AIDS*

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

United Nations, Security Council, 7268th meeting (2014). *Peace and security in Africa (S/RES/2177 (2014))* [Resolution]. Retrieved 5 July 2018 from https://undocs.org/S/RES/2177(2014)
Resolution 2177 on "Peace and security in Africa," adopted by the Security Council in 2014, recognizes the scale of and expresses the concern over the Ebola outbreak in West Africa. It also considers it as a threat to international health and safety. Accordingly, the resolution calls for action of the involved governments to develop country-wide mechanisms to manage the situation, as well as it appeals to the Member States to set up international travel limitations that would limit the spread of the disease and to provide support to the states suffering from the outbreak. In summary, this resolution provides delegates with a detailed overview of recommendations how the international community attempted to keep the Ebola emergency under control and prevent its further spread.

World Health Organization. (2005). *Communicable disease control in emergencies: A Field Manual*. Retrieved 14 August 2018 from:
http://apps.who.int/iris/bitstream/handle/10665/96340/9241546166_eng.pdf?sequence=1
This field manual is a technical guide designed to help health professionals and public health coordinators that are deployed in emergency situations to prevent, discover, and control diseases affecting large populations. The guide is divided into five main sections, where each represents one of the main principles guiding the response in disease outbreaks and epidemics situations. Those principles are rapid assessment, prevention, surveillance, outbreak control, and disease management. The main purpose of this guide is to provide effective and efficient measures to tackle global health emergencies. The document can therefore provide a good starting point for delegates' further research regarding specific aspects of disease prevention. In addition, it shows delegates how theory can and should guide the actual steps taken by health professionals in response to outbreaks.

World Health Organization. (2005). *International Health Regulations* [Report]. Retrieved 8 July 2018 from:
http://apps.who.int/iris/bitstream/handle/10665/246107/9789241580496-eng.pdf?sequence=1
The IHR are a legally binding framework developed by WHO with the primary purpose of assisting states on collaboration regarding protecting human health, life, and well-being, including during epidemics and disease outbreaks situations. The IHR are not designed to focus on a specific disease or health issue but are rather applicable to ever-changing health risks. The framework also serves as a legal background for the development of other health-related documents with regards to travel, transportation, sanitary rules, etc. The IHR provide delegates with an insight into how the international health system is being regulated on a large scale, and include a detailed description of various legal requirements that Member States need to follow.

World Health Organization. (2015). *Anticipating Emerging Infectious Disease Epidemics* [Meeting Report]. Retrieved 14 August 2018 from: http://www.who.int/csr/disease/anticipating_epidemics/meeting-report-2015/en/
This meeting report of the WHO informal consultation was publicized in December 2015 and serves as a first step toward predicting and being better prepared to respond to epidemics worldwide. The report provides a summary of what multidisciplinary experts suggest as mechanisms for better preparation for future epidemics. Overall, the report focuses on various aspects: lessons that can be learned from the past, discussion on the potential future epidemics, science and technology as opportunities, prevention of the spread of diseases, and others. The report is a valuable source for delegates on gaining information and insight into better understanding what factors influence the development of resilience strategies for epidemics and outbreaks.

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

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

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

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

Bibliography

Cambridge Dictionary. (2018). *Endemic* [Website]. Retrieved 1 July 2018 from: https://dictionary.cambridge.org/dictionary/english/endemic

Candeias, V. & R. Morhard. (2018). *How epidemics infect the global economy and what to do about it*. World Economic Forum. Retrieved 17 October 2018 from: https://www.weforum.org/agenda/2018/05/how-epidemics-infect-the-global-economy-and-what-to-do-about-it/

Center for Disease Control. (2017) *Overview of the CDC FY 2018 Budget Request.* Retrieved 17 October 2018 from: https://www.cdc.gov/budget/documents/fy2018/fy-2018-cdc-budget-overview.pdf

Hays, J. N. (2005). *Epidemics and Pandemics: Their Impacts on Human History*. Santa Barbara: ABC-CLIO Inc.

History of Vaccines. (2018). *All Timelines Overivew* [Website]. Retrieved 1 July 2018 from: https://www.historyofvaccines.org/timeline

Huppert, A. & G. Katriel. (2013). Mathematical modelling and prediction in infectious disease epidemiology. *Clinical Microbiology and Infection*, 19 (11): 999-1005. Retrieved 18 September 2018 from: https://doi.org/10.1111/1469-0691.12308

International Labor Organization. (2018). *Occupational safety and health in public health emergencies: A manual for protecting health workers and responders* [Report]. Retrieved 14 August 2018 from: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_633233.pdf

Kekulé, S. A. (2015). Learning from Ebola Virus: How to Prevent Future Epidemics. *Viruses*, 7 (7): 3789-3797. Retrieved 17 October 2018 from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4517126/

Kieny, M. et al. (2014). Health-system resilience: reflections on the Ebola crisis in western Africa. *Bulletin of the World Health Organization*, 92 (12): 850. Retrieved 18 September 2018 from: http://www.who.int/bulletin/volumes/92/12/14-149278.pdf

Médicins Sans Frontières. (2018). *Epidemics and Pandemics* [Website]. Retrieved 18 September 2018 from: https://www.msf.org/epidemics-narrative

Médecins Sans Frontières. (2018). *Who we are* [Website]. Retrieved 12 August 2018 from: https://www.msf.org/who-we-are

Movik, S. et al. (2010). Community-Led Total Sanitation (CLTS): Challenges and opportunities. *STEPS Working Paper 37: The Dynamics and Sustainability of Community-Led Total Sanitation: Mapping Challenges and Pathways*. Retrieved 18 September 2018 from: https://steps-centre.org/wp-content/uploads/STEPSsumCLTS.pdf

Oxford University Press. (n.d.). *Pandemic* [Website]. Retrieved 1 July 2018 from: https://en.oxforddictionaries.com/definition/pandemic

Oxford University Press. (2018). *Resilience* [Website]. Retrieved 17 September 2018 from: https://en.oxforddictionaries.com/definition/resilience

Thys S. et al. (2015). Why Latrines Are Not Used: Communities' Perceptions and Practices Regarding Latrines in a Taenia solium Endemic Rural Area in Eastern Zambia. *PLOS Neglected Tropical Diseases*, 9 (3): e0003570. Retrieved 17 October 2018 from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4352092/

United Nations Children's Fund. (2010). *Emergency aid and long-term solutions meet cholera outbreak in northern Cameroon* [Website]. Retrieved 13 August 2018 from: https://www.unicef.org/mdg/cameroon_56654.html

United Nations, Department of Public Information. (2018). *Global Issues: Health* [Website]. Retrieved 18 October 2018 from: http://www.un.org/en/sections/issues-depth/health/index.html

United Nations, General Assembly, Third session. (1948). *Universal Declaration of Human Rights (A/RES/217 A (III))*. Retrieved 10 September 2018 from: http://www.un.org/en/documents/udhr/

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

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

United Nations, General Assembly, Seventieth session. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*. Retrieved 18 September 2018 from: http://undocs.org/A/RES/70/1

United Nations, General Assembly. (2018). *Functions and powers of the General Assembly* [Website]. Retrieved 17 October 2018 from: http://www.un.org/en/ga/about/background.shtml

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

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

World Health Organization. (1946). *Constitution of the World Health Organization*. Retrieved 17 October 2018 from: https://treaties.un.org/doc/Treaties/1948/04/19480407%2010-51%20PM/Ch_IX_01p.pdf

World Health Organization. (2005). *Communicable disease control in emergencies: A Field Manual*. Retrieved 14 August 2018 from: http://apps.who.int/iris/bitstream/handle/10665/96340/9241546166_eng.pdf?sequence=1

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

World Health Organization. (2014). *Ebola outbreak - Protecting health workers is a priority for the WHO* [Press Release]. Retrieved 14 August 2018 from: http://www.who.int/workforcealliance/media/news/2014/ghwa_ebola_outbreak/en/

World Health Organization. (2015). *Anticipating Emerging Infectious Disease Epidemics* [Meeting Report]. Retrieved 14 August 2018 from: http://www.who.int/csr/disease/anticipating_epidemics/meeting-report-2015/en/

World Health Organization. (2015). *Key events in the WHO response to the Ebola outbreak* [Website]. Retreived 18 September 2018 from: http://www.who.int/csr/disease/ebola/one-year-report/who-response/en/

World Health Organization. (2016). *International Coordinating Group (ICG) on Vaccine Provision* [Website]. Retrieved 14 August 2018 from: http://www.who.int/csr/disease/icg/qa/en/

World Health Organization. (2017). *Emergency Response Framework* [Report]. Retreived 18 September 2018 from: http://apps.who.int/iris/bitstream/handle/10665/258604/9789241512299-eng.pdf;jsessionid=96CC609EBAD13C63D8468F8D6903C7DE?sequence=1

World Health Organization. (2018). *About WHO: Budget* [Website]. Retrieved 17 October 2018 from: http://www.who.int/about/finances-accountability/budget/en/

World Health Organization. (2018). *About WHO: What we do* [Website]. Retrieved 8 July 2018 from: http://www.who.int/about/what-we-do/en/

World Health Organization. (2018). *Building Resilience of Health Systems in Pacific Island LDCs to Climate Change* [Website]. Retrieved 17 October 2018 from: http://www.who.int/globalchange/projects/lcdf-pacific/en/

World Health Organization. (2018). *Climate change and human health - risks and responses. Summary* [Website]. Retrieved 13 August 2018 from: http://www.who.int/globalchange/summary/en/index5.html

World Health Organziation. (2018). *Community engagement in the Ebola response* [Website]. Retrieved 17 October 2018 from: http://www.who.int/features/2014/community-stories-ebola/en/

World Health Organization. (2018). *Deploying quality-assured medical teams when disaster strikes* [Website]. Retrieved 13 August 2018 from: http://www.who.int/hac/network/partnerships/en/

World Health Organization. (2018). *Disease Control in Humanitarian Emergencies* [Website]. Retrieved 18 September 2018 from: https://www.who.int/diseasecontrol_emergencies/en/

World Health Organization. (2018). *Disease outbreaks* [Website]. Retrieved 17 October 2018 from: http://www.who.int/emergencies/diseases/en/

World Health Organization. (2018). *Ebola virus disease* [Fact Sheet]. Retrieved 1 July 2018 from: http://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease

World Health Organization. (2018). *Ebola virus disease. Ebola situation reports: Democratic Republic of the Congo* [Website]. Retreived 17 September 2018 from: http://www.who.int/ebola/situation-reports/drc-2018/en/

World Health Organization. (2018). *Emergencies: How we work* [Website]. Retrieved 14 August 2018 from: http://www.who.int/emergencies/publications-resources/training/about/en/

World Health Organization. (2018). *General information on risk communication* [Website]. Retrieved 14 August 2018 from: http://www.who.int/risk-communication/background/en/

World Health Organization. (2018). *Global Influenza Surveillance and Response System (GISRS)* [Website]. Retrieved 9 July 2018 from: http://www.who.int/influenza/gisrs_laboratory/en/

World Health Organization. (2018). *Health Cluster: About Us* [Website]. Retrieved 13 August 2018 from: http://www.who.int/health-cluster/about/en/

World Health Organization. (2018). *How WHO works with other UN agencies* [Website]. Retrieved 18 September 2018 from: http://www.who.int/un-collaboration/partners/en/

World Health Organization. (2018). *Infection prevention and control in health care* [Website]. Retrieved 9 July 2018 from: http://www.who.int/csr/bioriskreduction/infection_control/en/

World Health Organization. (2018). *Influenza* [Website]. Retrieved 1 July 2018 from: http://www.who.int/influenza/en/

World Health Organization. (2018). *Pandemic Influenza Preparedness (PIP) Framework* [Website]. Retrieved 9 July 2018 from: http://www.who.int/influenza/pip/en/

World Health Organization. (2018). *Questions and answers about WHO's role in Humanitarian Health Action* [Website]. Retrieved 13 August 2018 from: https://www.who.int/hac/about/faqs/en/

World Health Organization. (2018). *Task Force on Education and Training* [Website]. Retrieved 17 October 2018 from: http://www.who.int/workforcealliance/about/taskforces/education_training/en/

World Health Organization. (2018). *WHO Emerging and Dangerous Pathogens Laboratory Network (EDPLN)* [Website]. Retrieved 9 July 2018 from: http://www.who.int/csr/bioriskreduction/laboratorynetwork/en/

World Health Organization. (2018). *The WHO Emerging Diseases Clinical Assessment and Response Network (EDCARN)* [Website]. Retrieved 9 July 2018 from: http://www.who.int/csr/edcarn/en/

World Health Organization. (2018). *WHO Standby Partnerships* [Website]. Retrieved 13 August 2018 from: http://www.who.int/hac/standby_partnerships/en/

World Health Organization. (2018). *Working with partners in health emergencies* [Website]. Retrieved 13 August 2018 from: http://www.who.int/emergencies/partners/en/

World Health Organization, Regional Office for South-East Asia. (2018). *Disease outbreaks* [Website]. Retrieved 17 September 2018 from http://www.searo.who.int/topics/disease_outbreaks/en/

World Health Organization, Regional Office for South-East Asia. (2018). *World Health Organization in South-East Asia* [Website]. Retrieved 11 August 2018 from: http://www.searo.who.int/about/en/

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

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