Massachusetts Institute of Technology

Model United Nations Conference

Background Guide

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Letter from the Secretary General

Dear Delegates,

I am very excited to welcome you to Massachusetts Institute of Technology's 17th annual Model United Nations Conference - MITMUNC XVII! After months of planning, training and organizing, we hope this conference will be a new, challenging, and enriching experience for you.

With all the difficulties the world has experienced last year and is currently still experiencing, we still look forward to a brighter future. Building a sustainable future requires a lot of collaboration and effort and we are all hopeful to see that from you, the leaders of tomorrow.

This year, we decided to focus on technology and its impact on our societies and the whole world to test the pros and cons of technological advancement. Tech diplomacy is an important theme that defines MITMUNC XVII, especially with the prevalence of Artificial Intelligence. Technological advancements have paved the way for great and helpful solutions, yet they also opened up space for tech-abuse, which really makes us think, where are we heading? What's next?

Dialogue, international relations and collaborations create the backbone of tech diplomacy and we are all looking forward to see your creativity spark during the conference to help implement tech diplomacy around the world, and fight technology-abuse that harms the international community.

Having experienced MITMUNC as a chair, then as a Secretary General, I am humbled and thrilled to guide MITMUNC into its best conference yet. Do not hesitate in contacting me or the secretariat team should you encounter any doubts along the way. I wish you the best of luck!

Sincerely,

Your Secretary General: Jad Abou Ali

For further inquiries, do not hesitate to contact us at sg-mitmunc@mit.edu.

MITMUNC XVII 2025

Letter from the Chair

Dear Delegates,

Welcome to MITMUNC and the World Health Organization Committee! We're so excited to meet you and can't wait to hear your amazing resolutions.

My name is Naana Ekua Annan. I'm a freshman from Accra, Ghana who is planning to major in Computer Science and Molecular Biology (Course 6-7). I participated in Model UN as a delegate in high school, so I'm very excited to be continuing as a chair this time.

We look forward to seeing you in February and wish you luck as you begin preparations!

Sincerely,

Your Chair: Naana

For further inquiries, do not hesitate to contact us who-mitmunc@mit.edu .

MITMUNC XVII 2025

Committee Introduction

The World Health Organization (WHO) is a specialized United Nations agency, founded in 1948, reporting to the Economic and Social Council (ECOSOC). The WHO's mission is to "keep the world safe and serve the vulnerable – so everyone, everywhere can attain the highest level of health" (World Health Organization, "Public Milestones through the years"). The WHO works with all the 194 member states, across 6 regions and more than 150 locations on the ground to support good health and wellbeing of individuals and most vulnerable communities.

In 1945, diplomats met in San Francisco, California, urging to establish an organization that supports the well-being of individuals in countries, especially after failed collaborations between countries to control the spread of deadly diseases across the world. Therefore, the WHO constitution was drafted and submitted in 1946 in the International Health Conference in New York. In 1947, the WHO launched the first-ever global disease tracking service. On April 7th 1948, the WHO constitution came into force. Thus, this date serves as the day of the official launch of the World Health Organization and is now celebrated as the world health day.

Initially, the WHO focused its initiatives on malaria, tuberculosis, yaws, syphilis, smallpox, and leprosy. Later, the WHO expanded to focus on antibiotics, influenza and its mutants, H1N1 detection and treatment, and most recently mental health, newborn health and abortion, HIV

treatment, and nutrition plans. WHO showed a significant role in responding to recent crises, such as the COVID-19 pandemic, in which WHO supported vaccine development and helped to ensure worldwide access to COVID-19 tests and vaccines (World Health Organization).

For the 2025-2028 period, WHO plans to focus on climate change and its impact on health, along with strengthening health systems, improving healthcare equity and access, and disease prevention (Disha Shetty)

Topic: Leveraging Digital Health Technologies to Achieve Universal Health Coverage (UHC)

I. Introduction

Universal Health Coverage (UHC) aims to ensure that all individuals and communities receive essential health services without suffering financial hardship (World Health Organization, "Universal Health Coverage"). However, achieving UHC remains a daunting challenge, particularly in least-developed countries (LDCs). Digital health technologies have emerged as a critical enabler in addressing barriers to healthcare access, quality, and affordability. From mobile health applications to artificial intelligence (AI) in diagnostics, these technologies have the potential to transform healthcare systems globally (WHO).

This guide will provide delegates with a comprehensive overview of digital health technologies, their role in achieving UHC, and key challenges and opportunities.

II. History

A. Early Development of Telemedicine

The concept of telemedicine dates back to the mid-20th century when NASA utilized it to monitor astronauts' health during space missions (Nesbitt). This early adoption demonstrated the potential of remote health monitoring to bridge geographical barriers. Concurrently, high income countries like the United States began experimenting with video consultations to bridge the gap between specialists and patients in remote areas. These developments laid the groundwork for modern telemedicine.

B. Rise of Mobile Health Applications in LDCs

The early 2000s saw a surge in mobile health (mHealth) initiatives, particularly in LMICs. With increasing mobile phone penetration, governments and NGOs recognized the potential of mHealth to address pressing healthcare challenges. One

notable program, SMS for Life, launched in Tanzania in 2009, leveraged text messages to track malaria medicine stock levels in rural clinics, reducing stockouts and saving lives (Barrington et al). This success catalyzed similar projects targeting maternal health, vaccination reminders, and disease surveillance in other low-resource settings.

C. Integration of AI and Data Analytics

By the 2010s, artificial intelligence (AI) and data analytics began revolutionizing digital health. Advanced algorithms were deployed for early disease detection, epidemic forecasting, and personalized medicine. For example, in 2011, IBM developed Watson Oncology, which was intended to enhance cancer diagnostics and treatment by analyzing vast amounts of medical data (Price). However, the technology faced significant challenges, including high costs, privacy concerns and regulatory hurdles (Price).

III. International Actions

A. WHO's Digital Health Strategy

The World Health Organization introduced its Global Strategy on Digital Health (2020-2025) to provide guidance and set global standards for digital health implementation (WHO). This strategy emphasizes capacity building, data security, and equity in digital health access, particularly for vulnerable populations. It also promotes global collaboration among member states to advance knowledge transfer and strengthen digital health systems (WHO).

B. ITU-WHO Collaboration

The International Telecommunication Union (ITU) and WHO launched the "Be He@lthy, Be Mobile" initiative to leverage mobile technologies for addressing non-

communicable diseases globally (World Health Organization, "Be Healthy Be Mobile"). For example, countries like Philippines and Senegal have implemented programs targeting tobacco cessation and diabetes, respectively (World Health Organization, "Country Programmes"). These initiatives underscore the potential of mobile technology in addressing public health challenges through mass reach and cost-effective solutions.

IV. Countries' Positions

A. High-Income Countries

High-income nations have made substantial progress towards UHC by leveraging advanced digital health technologies. Estonia, a pioneering country in the field of digital healthcare, has developed an e-Health system that integrates medical records, telemedicine services, and e-prescriptions into a secure and accessible platform (e-Estonia). Similarly, Japan has achieved UHC by implementing universal health insurance schemes (Kutty and Tochibayashi) and is now focusing on AI and robotics to manage healthcare for its aging population (Wright). Denmark has also prioritized telemedicine to manage chronic diseases such as diabetes, reducing healthcare costs and improving patient outcomes (Danish Ministry of Health).

B. Middle-Income Countries

Middle-income nations are making strides toward UHC by combining policy reforms and digital innovation. Brazil's Unified Health System (SUS) leverages electronic health records and telemedicine to serve rural populations, bridging gaps in healthcare delivery (Tikkanen, Roosa, et al). India's Ayushman Bharat Digital Mission aims to create a digital health ID system, streamlining healthcare access for over 1.3 billion citizens (Ayushman Bharat Digital Mission). These countries showcase how scalable digital solutions can address diverse healthcare challenges, including those posed by large and geographically dispersed populations.

C. Low-Income Countries

Low-income countries face resource constraints but are adopting innovative approaches to achieve UHC. Rwanda has utilized mHealth platforms like Babyl (from 2016 to 2023), which provided teleconsultations, prescription delivery and health advice (Price, "What Are the Implications of Babyl Rwanda's Closure for the Future of Digital Health in Rwanda?"). Rwanda's national health insurance scheme covers 90% of the population, making it a success story in healthcare access in sub-Saharan Africa (Wiysonge). Ethiopia has implemented community-based health insurance and Health Management Information Systems (HMIS) to improve rural healthcare delivery, with coverage expanding steadily over the past decade (WHO Ethiopia). These efforts highlight how low-income nations can adapt digital tools to meet their unique healthcare challenges, even with limited infrastructure.

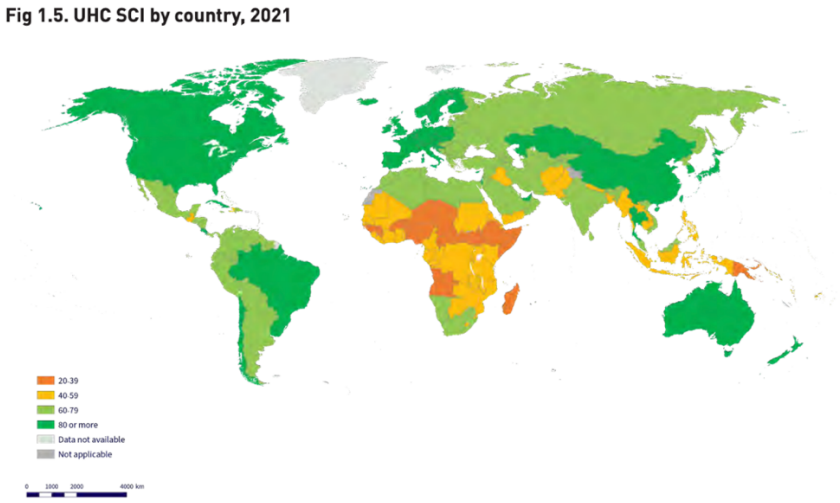

Figure 1 *Worldwide map indicating UHC Service Coverage Index for each country in 2021 (World Health Organization, Tracking Universal Health Coverage 2023 Global Monitoring Report)*

V. Projections and Implications

A. Enhanced Accessibility

Digital health is expected to bridge gaps in healthcare access, particularly for remote and underserved populations. Telemedicine can reduce travel costs and wait times, while mHealth apps can empower individuals to manage their own health. This trend aligns with the broader goal of UHC, ensuring that no one is left behind due to geographical or financial barriers.

B. Ethical and Regulatory Concerns

As AI and big data play an increasingly significant role, questions about data privacy, algorithmic bias, and equitable access will require global attention. Without robust ethical guidelines, there is a risk of exacerbating health inequities. International frameworks will be critical in addressing these challenges to ensure the benefits of digital health are shared equitably.

VI. Conclusion

The intersection of digital health and UHC presents an unprecedented opportunity to transform global health systems. By addressing barriers and fostering collaboration, nations can leverage technology to ensure equitable and sustainable healthcare access for all.

VII. Questions to be Addressed

1. How can countries address the digital divide to ensure equitable access to digital health technologies?
2. What role should the WHO play in regulating digital health tools and ensuring ethical implementation?
3. How can public-private partnerships be leveraged to expand digital health services?
4. What safeguards are needed to protect patient privacy and data security?
5. How can nations ensure the sustainability of digital health initiatives?
6. How can member states collaborate to advance knowledge transfer and strengthen digital health systems?

VIII. Recommended Reads

WHO Global Strategy on Digital Health

WHO. *Global Strategy on Digital Health 2020-2025*. 2021, www.who.int/docs/default-source/documents/gs4dhdaa2a9f352b0445bafbc79ca799dce4d.pdf.

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