

NHSMUN50

National High School Model United Nations



WHA
UPDATE PAPER



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Dear Delegates,

I'm beyond thrilled to welcome you to the World Health Assembly Committee (WHA)! My name is Andrés Luna de la Garza, and I will be your Assistant Director for Session I of NHSMUN 2024. This is my first year being part of the NHSMUN staff, and I'm excited to get to know you all, hear your ideas, and help you develop new skills!

I was born and raised in Monterrey, Mexico, better known as the city of mountains. I'm currently a freshman at Universidad de Monterrey studying an engineering degree in mechatronics. After graduating, I plan to keep enrolled in STEM to pave my way to becoming an astronaut. At the same time, I like to get involved in many activities on campus and create unforgettable experiences. Outside of school, my hobbies are spending time with my family, watching TV series, movies, and NBA games, playing basketball with my friends, listening to music, and hitting the gym.

I have been involved in Model United Nations (MUN) for the past seven years in many local and international conferences, either physically or virtually, as a delegate or staff. Throughout these years, I've developed many skills such as public speaking, teamwork, inclusion, communication, and leadership which have opened many doors for me like this one, and all thanks to MUN. Just like me, I know that you'll be able to develop if not polish, skills that will be essential for your future.

For your preparation, look at the Background Paper and the Update Paper to understand the topics and be aware of the latest activity. As we get closer to the conference, stay informed and updated with all recent activities, and do not hesitate to reach out for any help. Lastly, feel free to contact me or any of us if you have any questions about the topics or want any advice. Good luck, and I'm looking forward to meeting you and hearing all of your amazing contributions!

Best,

Andrés Luna de la Garza
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Dear Delegates,

Welcome to the World Health Assembly Committee (WHA)! My name is Ariel Ntim-Addae, and I, alongside Andrés Luna de la Garza, will be your Assistant Director for Session I of the conference. This is my first year in NHSMUN and my first year on staff! I am so excited to get to know all of you personally and help you grow and develop as people and delegates.

I was born in the USA and raised in Ghana from the age of 3 onwards (my entire family is Ghanaian!). I am a freshman at Williams College, hoping to major in Economics and History with a concentration in Global Studies. After graduation, I plan to combine an MBA and J.D. in a graduate program and eventually pursue a career in civil rights law or diplomacy. Outside of my academic and career aspirations, however, I'm very creative. I love reading, listening to music, watching 90s and 2000s movies, experimenting with my fashion, and working on my writing!

I've been involved in regional and national MUN conferences for seven years. MUN has greatly impacted me throughout the years, teaching me how to express my opinions on important issues and resolve complicated issues diplomatically. More importantly, MUN has allowed me to meet the most amazing people, some of whom I am still in contact with today. As your AD, I hope I can create a similarly amazing experience for all of you! I want to create an atmosphere where you can grow and develop, both as delegates and as people.

The two topics we will discuss during the conference are undoubtedly important, and we have researched to the best of our ability to help you with your research throughout the conference. I look forward to seeing your resolutions for these topics, and I'm so eager to meet you all in person! If you have any questions, please feel free to reach out to me. It doesn't have to be about the topics or the conference. I'm here to help you with absolutely anything!

Best Regards,

Ariel Akua Ntim-Addae

World Health Assembly

Session I

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Ellie White

Dear Delegates,

I'm overjoyed to welcome you to the World Health Assembly Committee for NHSMUN 2024! My name is Angelo Chen, and I will be one of your Assistant Directors for Session II this year alongside Tomas Antolinez. This is my first year serving on NHSMUN staff. However, I did attend this conference in my senior year of high school in 2023 as a delegate in the Food and Agricultural Organization (FAO). While the roles for me are reversed now, I'm looking forward to seeing you all engage in the same fruitful and engaging discussions that I experienced last year.

I was born and raised in Central New Jersey, but my family is originally from China. I currently attend Rice University in Houston, Texas, where I am a Biosciences and Health Sciences major on the pre-med track. At Rice, I'm currently working on health equity and awareness initiatives, but I'm also exploring other interesting fields. I enjoy making new recipes, hitting the gym, gardening, watching Netflix shows, and traveling in my free time. My favorite destination so far has been Japan, but I'm looking forward to hopefully visiting Spain and Portugal one day.

As you prepare your materials for the conference, I know that you all must feel all sorts of emotions. Whether that be stress or excitement, rest assured that you will leave the committee with a newfound understanding of the topics. The debates you will have with peers and the breadth of opinions you will be exposed to at NHSMUN are unique experiences that are difficult to match. Having your perspectives challenged, you will be forced to think more deeply about the pressing societal, cultural, and economic issues facing our world. If you still have any general concerns about the committee or specific topics, please feel free to reach out!

Your directors and I have spent hours writing the background guide, which is jam-packed with information that should give you a comprehensive understanding of the topics. Combined with the research that you should have done on your own, I'm certain that you all will come into committee empowered with information to start and make a change. We have written this Update Paper to provide additional nuance on what we view as pressing recent developments regarding Assistive Health Technologies. From now until the day of the conference, ensure you stay up to date and keep pushing forward! I can't wait to meet you all in person!

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Dear Delegates,

I am excited to welcome you to the World Health Assembly (WHA). My name is Tomas Antolinez Cuadros, and I will be serving as your Assistant Director for Session II of NHSMUN 2024. Although this is my first year being a part of the NHSMUN staff, I have been in MUN for quite a long time. Being on staff has been such an honor already, and I can't wait to meet all of you in March!

I was born and raised in Cúcuta, Colombia, which is the city on the border between Colombia and Venezuela. I attend the University of Los Andes in Bogota, and I'm a junior student majoring in Political Science with a double degree in Law. After I graduate, I plan to attend graduate school abroad. Aside from school, my favorite hobby is scuba diving, but my hobbies also include traveling, reading, and more.

I understand that conferences can be challenging, but I want to assure you that this conference will be an incredible experience for everyone involved. MUN holds a unique place in my heart because it not only facilitates interaction with individuals worldwide but also fosters personal growth. Now that I'm finishing my MUN career and starting to get enrolled with some UN conferences such as the ECOSOC Youth Forum or the COP28, I can assure you that MUN has prepared me in a complete way to have the core abilities to pursue outstandingly on those events and in life. I hope NHSMUN 2024 brings you excitement and proves to be a valuable learning opportunity. Feel free to reach out if you have any questions or concerns about the conference.

Your directors have prepared a very thorough Background Guide that contains a great deal of information regarding the topics. After the COVID-19 pandemic it has been clear for everyone that strengthening the health workforce is crucial for ensuring the well-being of communities and the effectiveness of healthcare systems worldwide. A robust and skilled health workforce is essential in responding to emerging health challenges, providing timely and quality care, and promoting preventive measures. As well as the advancement of assistive health technology in developing states holds profound significance in bridging healthcare disparities and promoting inclusive and accessible medical care. Deploying innovative technologies in these regions can overcome geographical barriers, improve diagnostic capabilities, and enhance treatment outcomes.

This is only a small preamble of what you will find on the guide and why it's important to negotiate these topics. I can't wait to see what you all bring to the table during the conference, and I'm looking forward to meeting you!

Tomas Antolinez
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Table of Contents

Strengthening the Health Workforce	7
Advancement of Assistive Health Technology in Developing States	14
Works Cited	21



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NHSMUN 2024

TOPIC A:
STRENGTHENING THE HEALTH WORKFORCE

Photo Credit: CDC Global

Introduction

Since World War II, the global health industry has struggled to keep its workforce. Because of this, many policymakers are voicing support for strengthening the health workforce. This involves governments' systematic structures, national and international organizations, and NGOs. Since the turn of the millennium, multiple health-related events, such as the COVID-19 pandemic, have shown the importance of this issue. The increase in mortality rate, the insufficient medical staff, and the necessity for a strong health system during the global pandemic have provided the information needed to identify shortcomings in the global healthcare workforce. Eradicating the problems that healthcare workers and the world face is of utmost importance to the future of world health.

Lessons based on previous experiences with healthcare have led to an increase in universal healthcare worldwide. However, as the population has grown, the need for healthcare services has expanded, bringing more troubles. Many organizations and institutions have worked to enlarge the health workforce. As time passes, other challenges arise from social and economic factors. Despite this, the goal of preserving health and giving care to those who need it remains the same, and the health workforce must act upon it. This committee is responsible for strengthening the health workforce through international agreements, diplomacy, and long-lasting solutions for the good of all.

Self-Care Interventions

Currently, 4.5 billion people—more than half the world population—lack access to essential health services.¹ In addition to this, health worker shortages are expected to reach

10 million by 2030.² This has more strongly affected rural and marginalized populations. These individuals lack access to quality health information, services, and products and often face discrimination while trying to obtain them. To address this, the World Health Organization (WHO) encourages self-care interventions to reach universal health coverage, promote health, maintain world security, and serve the vulnerable.³

Self-care is the ability of individuals, families, and communities to promote their own health, prevent diseases, maintain health, and manage illness and disability with or without the support of a health worker.⁴ Self-care can be a temporary solution to the global healthcare worker shortage. These interventions enable people to manage their health independently when healthcare workers are unavailable. Examples of self-care include medicines that can be taken without a healthcare provider, counseling services, and digital technologies.⁵ Self-care does not replace the healthcare system but helps people take charge of their health by providing ways to maintain their health independently. These health interventions include tools such as quality drugs, devices, diagnostics, and digital products provided outside formal health services. Examples of these interventions are contraceptive medication, pregnancy tests, HIV self-tests, and self-monitoring of blood pressure and blood glucose.⁶ Self-care interventions can also be used as a preventive measure to avoid visiting a healthcare worker, especially in places lacking quality health services or access to health facilities.⁷

At the World Health Summit in Berlin in October 2023, leaders worldwide discussed ways to address some of the most pressing issues in healthcare today, including the shortage of healthcare workers. WHO and the Global Self-Care Federation (GSCF) organized a panel at the summit to discuss how self-care can help overcome this issue.⁸ During the World Health

1 “Global leaders discuss healthier future for all: Top 5 fast facts,” *United Nations*, September 20, 2023, <https://news.un.org/en/story/2023/09/1141042>.

2 *Self-care interventions for sexual and reproductive health and rights to advance universal health coverage: 2023 Joint statement by HRP, WHO, UNDP, UNFPA and the World Bank* (Geneva: World Health Organization, October 2023), 1, <https://iris.who.int/bitstream/handle/10665/373301/9789240081727-eng.pdf?sequence=1>.

3 “Self-care interventions for health,” World Health Organization, accessed December 11, 2023, <https://www.who.int/health-topics/self-care>.

4 World Health Organization, “Self-care interventions for health.”

5 World Health Organization, “Self-care interventions for health.”

6 World Health Organization, “Self-care interventions for health.”

7 World Health Organization, “Self-care interventions for health.”

8 “Self-care: The Invisible Glue Holding Healthcare Systems Together,” *Health Policy Watch*, October 27, 2023, <https://healthpolicy-watch.news/self-care-the-invisible-glue-holding-healthcare-systems-together>.



An Innorvax global health pharmacist conducting a point of care test on a geriatric patient

Credit: Haddy Sowé

Summit, participants developed a joint statement on self-care that was signed by three UN agencies, including WHO.⁹ This joint statement highlighted why self-care is essential and how it can save the healthcare sector time and money. It also lessens the workload of already overworked health workers, helping to address health worker shortages. For example, the European Union (EU) would need 120,000 more general practitioners than it currently has each year to meet current demand. However, by expanding self-care, the EU could save USD 34 billion and save physicians an estimated 1.8 billion hours per year.¹⁰ This means that physicians can spend more time focusing on more demanding care. Self-care also helps patients rely less on health workers, which are in short supply, and can reduce the financial burden of healthcare for some patients.¹¹

In 2023, WHO published the self-care competency framework, divided into three volumes. The main focus of this framework is to introduce and define ten key skills needed for health and care workers to support self-care in their clinical practices. These skills are needed along with standard procedures in decision-making, effective communication, collaboration,

evidence-informed practice, and personal conduct.¹² With all of these in place, healthcare centers can be prepared to enable better self-care practices in their patients. Beyond these skills, the first volume focuses specifically on the importance of health literacy in self-care intervention. There are two different types of health literacy: personal health literacy and organizational health literacy. Personal health literacy is the ability of individuals to make decisions about their health and the health of others using reliable information. Organizational health literacy, on the other hand, refers to the ability of organizations and institutions to distribute information about health to patients that is accessible and empowers them to make informed health-related decisions.¹³ Self-care interventions rely on the patient having access to reliable information so they can make decisions about their care. Therefore, health literacy should be essential for this committee to strengthen self-care intervention worldwide. Self-care intervention strategies only work if patients are well-equipped to make informed decisions about their own health. In this way, health workers are still essential to self-care interventions. For self-care interventions to work, health

⁹ *Health Policy Watch*, “Self-care.”

¹⁰ *Health Policy Watch*, “Self-care.”

¹¹ *Self-care interventions for sexual and reproductive health*.

¹² World Health Organization, “Health and care workers have a critical role in supporting self-care,” *World Health Organization*, July 24, 2023, <https://www.who.int/news/item/24-07-2023-health-workers-have-a-critical-role-in-supporting-self-care>.

¹³ “What Is Health Literacy?” Centers for Disease Control and Prevention, accessed January 16, 2024, <https://www.cdc.gov/healthliteracy/learn/index.html>.

workers must be able to accurately determine a patient's current level of health literacy and then provide them with the information and resources they need to make informed decisions related to their health.¹⁴

The concept of self-care interventions expands past the individual and the community. Self-care interventions can also prevent disease spread and help manage illness or disability without the need for healthcare workers. This can look as simple as wearing a mask in public to stay safe from airborne pathogens. Pathfinder International has begun focusing on this in a different area—sexual, reproductive, and maternal health. The director of this organization in Nigeria has said that “standardising guidance on self-care for sexual reproductive and maternal health...will strengthen people-centered approach[es] to health and wellbeing.”¹⁵ This comes after the WHO emphasized a new focus on self-care interventions regarding reproductive health in Nigeria. Recently, the country has been moving toward strengthening self-care interventions in rural communities. By strengthening self-care interventions in this area, the community as a whole can improve its well-being.¹⁶ The importance of reproductive care in a community cannot be understated, as it is one of the most essential aspects of community wellbeing.

Health workers and others who help with self-care interventions must also understand the cultures and healthcare systems in the countries where they work. For example, handing out pamphlets about self-care strategies will only help patients if they are distributed in the patients' language or if they can read. Additionally, understanding the values of the patients and their cultures is vital to consider when it comes to health literacy. Because there is so much diversity between and within countries, health literacy campaigns must be adapted to the specific groups that they target.¹⁷ Cultural sensitivity in healthcare work will eventually lead to more robust self-care interventions and better healthcare outcomes.

Cultural sensitivity becomes especially important when working with Indigenous peoples. The concept of self-care and self-care interventions for better health have been present in Indigenous communities for centuries, and many of their practices focus on collective resilience and resistance against the effects of colonization. For example, the Yawuru people in Australia have a concept of self-care that extends beyond the self and into the community and surrounding environment.¹⁸ This idea is centered around the concept of the “continuum of healing,” meaning that a community and environment must be healthy for an individual to be truly healthy.¹⁹ Although Western self-care ideas center on medical and physical well-being, the Indigenous perspective on self-care focuses more extensively on social and emotional well-being. In this case, practices such as cultural reclamation, connecting with Indigenous Elders and knowledge keepers, strengthening community connections, and even conflict resolution are a form of self-care.²⁰ While this is not to say that Western ideas on self-care are irrelevant, it is important to consider that other perspectives on health may not fit within the Western ideal but are equally valuable. For Indigenous communities, this aspect of self-care is a central consideration, and culturally sensitive practices should consider this.

Self-care interventions can potentially reduce barriers to healthcare access for many people who currently do not have access to health services. They can also help reduce the workload on health workers, especially in the face of a worldwide health worker shortage. However, health workers and other world leaders must still be involved in self-care interventions to help empower patients to make informed decisions about their health.

Healthcare Worker Strikes

The importance of strengthening the healthcare workforce is highlighted in the Kaiser Permanente Nursing Strike case.

14 *Self-care competency framework. Volume 1. Global competency standards for health and care workers to support people's self-care* (Geneva: World Health Organization, 2023), <https://iris.who.int/bitstream/handle/10665/371607/9789240077423-eng.pdf?sequence=1>.

15 Anthonia Obokoh, “Group intensifies intervention to raise awareness on reproductive, maternal health,” *Business Day*, August 29, 2023, <https://businessday.ng/news/article/group-intensifies-intervention-to-raise-awareness-on-reproductive-maternal-health/>.

16 Obokoh, “Group intensifies intervention to raise awareness.”

17 *Health Policy Watch*, “Self-care.”

18 Pat Dudgeon, Emma Carlin and Abigail Bray, “Rethinking self-care through an Indigenous lens — the importance of community,” *BMJ* 383 (November 13, 2023), <https://doi.org/10.1136/bmj.p2494>.

19 Dudgeon, “Rethinking self-care through an Indigenous lens.”

20 Dudgeon, “Rethinking self-care through an Indigenous lens.”

Kaiser Permanente cares for over 13 million patients across California, Oregon, Colorado, Virginia, Washington, and Washington DC, as one of the largest non-profit healthcare providers in the USA.²¹ On October 4th, 2023, 75,000 healthcare professionals, including nurses, pharmacists, and emergency department technicians, protested the strained working conditions of the hospital. Credited as the largest healthcare worker strike in the history of the world, the three-day strike devastated millions across the USA. Because medical staff were unavailable, care was disrupted, and patients were forced to move to other hospitals for appointments and medication. Hospital rooms were also cleaned less frequently, posing a danger to patients with weaker immune systems, and travel workers struggled to adjust to Kaiser’s way of operation within the short timeframe of the strike.²² Overall, this had a powerful impact on the healthcare in the region.

Healthcare worker strikes do not occur often in the US. This is because when workers choose to strike, they choose between their working conditions and the care of their patients. The Kaiser Permanente strike proved to be a culmination of

21 Danielle Kaye, “75,000 Kaiser nurses, pharmacists and other workers have walked off the job,” National Public Radio, October 04, 2023, <https://www.npr.org/2023/10/04/1203225614/kaiser-permanente-historic-strike-health-care-workers-nationwide>.

22 Reed Abelson, “What the Kaiser Permanente Strike Means for Patients,” *The New York Times*, October 04, 2023, <https://www.nytimes.com/2023/10/04/health/kaiser-strike-health-care.html>

23 Shira H. Fischer, “Why Health Care Workers Are Striking,” *The Rand Blog*, October 9, 2023, <https://www.rand.org/pubs/commentary/2023/10/why-health-care-workers-are-striking.html>.

24 Jesse Noyes, “The hidden toll: The aftermath of understaffing and burnout post-COVID-19,” *Physicians Practice*, August 03, 2023, <https://www.physicianspractice.com/view/the-hidden-toll-the-aftermath-of-understaffing-and-burnout-post-covid-19>

25 Fischer, “Why Health Care Workers Are Striking.”

National Nurses United protesting unsafe staffing ratios and bad medical equipment, emphasizing its effect on patients through their signs.

Credit: TDKR Chicago 101



many factors, such as burnout to low pay.²³ Interviews with healthcare workers revealed that Kaiser Permanente faces a short-staffing crisis, leading healthcare workers to experience high levels of stress, ultimately resulting in the deteriorating quality of service to patients. The aftermath of COVID-19 – especially the loss of 180,000 healthcare workers in the first two years of the pandemic– has severely worsened the shortage and increased the workload of workers in the healthcare industry.²⁴ Furthermore, worker pay was insufficient to keep up with the increasing cost of living in the USA. Workers struggled with poor quality equipment and few opportunities for career advancement within the healthcare industry. The increased burden placed on workers and the low wages and low benefits they received pushed them to strike.

Kaiser employees demanded a higher pay of USD 25-per-hour minimum wage for all healthcare workers and a bonus to reflect the changes in the cost of living that are experienced internationally.²⁵ Kaiser employers are amongst some of the better-paid healthcare professionals within the industry. Their power in the healthcare market suggests that

healthcare worker strikes are likely to increase in the future. Strikes have lasting effects on hospitals, workers, and patients. Hospitals face increased costs due to rescheduling routine and non-emergency procedures and hiring travel nurses to fill hospital positions temporarily. Strikers don't receive pay for the duration of their strike. While many workers' unions pay workers through a strike fund, strikers often cannot support themselves if the strike lasts too long. As a result, when strikes continue for an extended period, healthcare professionals may leave in favor of other careers, worsening the worker shortage. In the case of losses, workers lose not only income but job benefits depending on their employer. Hospitals often retaliate against strikes by threatening a reduction of workers' benefits when strikes last for extended periods. Furthermore, the remaining workers face even higher levels of burnout, and the rescheduling of preventative care sessions like cancer screening may prove fatal for patients. This contributes to the high turnover rates in many healthcare professions, especially nursing. More concerning, studies show that over 800,000 nurses plan to leave by 2027. That equates to 20 percent of the US nursing workforce.²⁶ The aging nursing workforce exacerbates this figure, as many elderly workers will be retiring within the next 15 years. Meaning that there will be a large healthcare worker shortage in the very near future unless action is taken.

Similar strikes have occurred in other American states, Israel, the UK, and Germany in 2023. The UK National Health Service declared more strikes to come as of January 2024.²⁷ In the Quebec province of Canada, over 80,000 healthcare workers went on strike in November 2023. This strike delayed over 1,000 surgeries while the workers fought for higher pay and better working conditions.²⁸ Although the union representatives of these workers attempted to negotiate on their behalf, the resulting offers from the provincial government were "insulting," leading the workers to strike.²⁹ Similarly, healthcare workers began striking in Sri Lanka in

early January 2024. As healthcare workers from all departments walked out, the government was forced to bring in soldiers to maintain the necessary workforce for the hospitals to run. The workers in Sri Lanka are striking to ask for better pay.³⁰ This case shows the immense power that healthcare workers have when they strike. Despite their tremendous value to society, these workers are consistently undervalued. This recent trend in strikes suggests that the most pressing issue regarding strengthening the healthcare workforce may not be encouraging people to join the workforce but instead retaining those already in it. This must begin with increasing wages and improving working conditions for these workers. Fixing the existing issues in this area will encourage more individuals to join these careers.

Healthcare workers need recognition, competitive compensation, benefits, and a supportive workplace culture. These incentives will encourage the growth of the medical community. Furthermore, an emphasis on increasing the opportunities for professional development is vital. Professional development can be done by offering opportunities for workers to further their education or by paying for them to attend conferences and workshops. This also ensures that workers can grow within their careers, expanding upwards as more workers come to fill the spots more experienced workers leave behind.

Conclusion

The goal of strengthening the health workforce is of undeniable importance to the global community. However, the reasons for this crisis must be addressed and investigated to understand the healthcare worker shortage. The worldwide weakness in healthcare systems is highlighted by the scarcity of nurses and the strikes that aggravate the healthcare worker shortage. However, this is contrasted by the growth of the rural health workforce. Solutions such as strengthening

26 Meg Lambrych, "What Happens When Nurses Strike? Exploring The Aftermath," *Nurse Journal*, September 08, 2023, <https://nursejournal.org/articles/what-happens-when-nurses-strike/>.

27 "NHS strike action in England", UK Parliament, December 6, 2023, <https://commonslibrary.parliament.uk/research-briefings/cbp-9775/>.

28 Erika Morris, "80,000 Quebec health-care workers kick off 2-day strike, announce another walkout later this month," *CBC News*, November 8, 2023, <https://www.cbc.ca/news/canada/montreal/fig-health-care-workers-november-strike-1.7021552>.

29 Morris, "80,000 Quebec health-care workers kick off 2-day strike."

30 "Soldiers in Sri Lanka's hospitals as health care workers strike," *Tamil Guardian*, January 23, 2024, <https://www.tamilguardian.com/content/soldiers-sri-lankas-hospitals-health-workers-strike>.

self-care interventions can help ease the healthcare system's demands. New information like this displays the ever-increasing significance of keeping updated with health workforce crises. The interconnected nature of public services worldwide reveals the weaknesses in our healthcare systems and their importance to community and industry wellbeing. As we navigate the complex 21st-century health landscape, prioritizing the strength of the health workforce must remain a central focus for world leaders, policymakers, and the global community. We can lay the groundwork for a healthier, stronger future together.



WHA

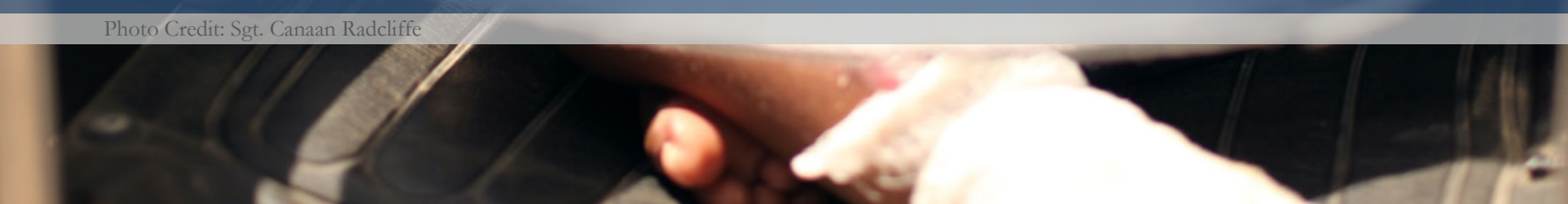
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TOPIC B:

ADVANCEMENT OF ASSISTIVE HEALTH TECHNOLOGY IN DEVELOPING STATES

Photo Credit: Sgt. Canaan Radcliffe



Introduction

Assistive health technology, or assistive technology (AT), enables people with disabilities to live an improved and independent life. In developing countries, access to these technologies is limited. This is due to and is not limited to financial resources, poor assignment of healthcare, and economic supply and demand. Assistive technology can be described as tangible items. Including items such as wheelchairs and eyeglasses or a digital application that helps ease more accessible information and improves communication. Notably, assistive technology is an umbrella term that can be used to describe issues with infertility and mental health as well. In recent years, assistive technology has improved through artificial intelligence and has enhanced accessibility. Thanks to emphasis on rehabilitation services and assistive technology donations between and within nations. Overall, as the fight for improving assistive technology is ongoing, noteworthy accomplishments and challenges have been worth addressing. One notable assistive technology challenge is the immense difficulties faced by the overlap of children and those in humanitarian crises. Understanding the intersection between these AHT challenges is crucial to crafting solutions that help the most vulnerable.

In addition, integrating artificial intelligence/machine learning (AI and ML, respectively) with assistive technology has significantly improved. This has provided opportunities for greater access to more high-quality data, training and education, and clinical needs regardless of conditions or environment. The use of this technology is both a challenge and an opportunity. However, the slow movement of machine learning and healthcare into the market, extensive costs, and the requirement for mass file collection can be challenging for lower-income countries. Proposed solutions must address these concerns to tackle the scope of the problem in the best way.

Challenges for Children with Disabilities in Armed Conflict

Due to their mental or physical disorders, disabled children in war zones are at a unique disadvantage in zones of armed conflict. The Office of the Special Representative of the Secretary-General for Children and Armed Conflict published a discussion paper in 2023. The paper further explored the impacts of armed conflict on children with disabilities and

what can be done to mitigate them. The paper explains that physical disabilities involving movement challenges make evacuation and transportation in dangerous situations significantly more difficult. In addition, the lack of Assistive Health Technologies such as wheelchairs or prosthetics further complicates this problem. Those who have hearing or vision disabilities may not even be aware of events unfolding around them, contributing to the unique challenges faced by disabled people in war zones.

Given that children are highly dependent on others for their safety, the combination of disabilities and reliance on others makes being able to flee attacks or dangerous areas a substantive challenge for children with disabilities in armed conflict.¹ Although there is little data on the subject, children with disabilities in conflict zones are likely at greater risk of experiencing grave violations.² Grave violations refer to a United Nations Security Council Resolution adopted in 1999. This resolution established six grave violations against children in times of conflict and asked the Secretary-General to report on them.³ Data shows that both children and people with disabilities are disproportionately vulnerable to grave

1 Ariane Lignier, "A new discussion paper highlights the devastating impact of armed conflict on children with disabilities," *Office for the Special Representative of the Secretary-General for Children and Armed Conflict*, December 7, 2023, <https://childrenandarmedconflict.un.org/2023/12/a-new-discussion-paper-highlights-the-devastating-impact-of-armed-conflict-on-children-with-disabilities/>.

2 Laura Perez, *Towards Greater Inclusion: A Discussion Paper on the CAAC Mandate and Children with Disabilities in Armed Conflict* (New York: Office of the Special Representative of the Secretary-General for Children and Armed Conflict, December 2023), <https://childrenandarmedconflict.un.org/wp-content/uploads/2023/12/Towards-Greater-Inclusion-high-res-no-bleed.pdf>.

3 "The Six Grave Violations," Office of the Special Representative of the Secretary-General for Children and Armed Conflict, accessed January 17, 2024, <https://childrenandarmedconflict.un.org/six-grave-violations/>.

violations. Therefore, it is likely that children with disabilities are significantly affected due to this intersection of identities.⁴

A grave violation children with disabilities are at risk of experiencing is recruitment by armed groups. This is the reality in families living in poverty. Research shows that families with children with disabilities are more likely to live in this economic situation. Since children with disabilities might not be able to participate in economic activities that can help generate income for their families, their caretakers might be more likely to offer them to armed groups in exchange for money.⁵ Additionally, when fleeing a conflict zone, caretakers are more likely to abandon children with disabilities due to challenges they might face when moving from one place to another. Research shows that armed groups are more likely to recruit children without parents or caregivers to protect them.⁶ Children with disabilities face a higher risk of violence and abduction for the same reasons.⁷ Furthermore, denial of humanitarian assistance impacts children with disabilities because they might require more support. For example, assistive technologies, such as electric wheelchairs and nebulizers for respiratory support, often require electricity. During conflicts, however, there might be electricity shortages that prevent children from accessing assistive technologies.⁸

The mental toll and guilt faced by children in areas of armed conflict after being abandoned can result in long-lasting mental health struggles—also difficulties functioning and accessing other critical needs. Physically or mentally disabled children are at a higher risk of abandonment. This can also result in higher rates of long-lasting traumas and mental disorders. In fact, “separation from extended family and close friends...and frightened, stressed-out parents whose capacity for warmth and reassurance may be greatly diminished” are stressors that can result in Post-Traumatic Stress Disorder (PTSD).⁹ In addition to grave violations and mental health struggles,

children with disabilities are disproportionately impacted by conflict when it comes to education. UN Sustainable Development Goal (SDG) 4: Quality Education advocates for equitable and inclusive education for all. Educational access and opportunity is a crucial resource for all children. While all children face challenges accessing schooling during armed conflict, the issue is especially relevant for disabled children who may need Assistive Health Technologies (AHTs). For example, children with movement disabilities require support from others to transport them to educational centers.

In contrast, children with hearing and visual impairments require specialized health technologies to enable them to thrive in the classroom. During armed conflict, armed groups often attack schools. For example, it is estimated that 3,790 educational facilities have been damaged or destroyed in Ukraine since February 2022 due to the Russian invasion.¹⁰ Additionally, UNICEF USA estimates that at least 221 schools have been eliminated in Gaza due to armed conflict. This is more than 40 percent of all schools in Gaza.¹¹ When schools are attacked during conflict, children with disabilities often lose access to AHTs that they need to get an education. These technologies include physical ones like wheelchairs and hearing aids but also accessible buildings, unique educational materials, and special counseling. When schools are destroyed or inaccessible during times of armed conflict, disabled children are put even further back in terms of educational opportunity.¹²

Without access to AHTs, disabled children in areas of armed conflict face more significant safety concerns. However, armed conflict creates difficulties in accessing AHTs. Due to supply chain problems or import restrictions by governmental powers, providing necessary AHTs remains challenging. This can be seen in Gaza due to the Israel-Hamas war. Civilians in Gaza have been living under an Israeli blockade for over

4 Perez, *Towards Greater Inclusion*.

5 Perez, *Towards Greater Inclusion*.

6 Perez, *Towards Greater Inclusion*.

7 Perez, *Towards Greater Inclusion*.

8 Perez, *Towards Greater Inclusion*.

9 Kenneth Miller, “War, Toxic Stress, and the Mental Health of Children,” *Psychology Today*, November 23, 2023, <https://www.psychologytoday.com/us/blog/the-refugee-experience/202311/war-toxic-stress-and-the-mental-health-of-children>.

10 “Ukraine: War’s Toll on Schools, Children’s Future,” Human Rights Watch, November 9, 2023, <https://www.hrw.org/news/2023/11/09/ukraine-wars-toll-schools-childrens-future>.

11 Sarah Ferguson, “Children Trapped in Gaza Conflict Face Generational Trauma,” *UNICEF USA*, November 1, 2023, <https://www.unicefusa.org/stories/children-trapped-gaza-conflict-face-generational-trauma>.

12 Perez, *Towards Greater Inclusion*.



A conference in Colombia discussing the digital divide
Credit: ITU Pictures

16 years. This blockade has made it difficult for people with disabilities in Gaza to access AHTs.¹³ This issue is even more prevalent now, given increased violence and Israeli attacks in the region since the October 7 Hamas attack on Israel. For example, a blind West Bank resident shared that because many people in Gaza do not have power currently, they cannot use electric wheelchairs or devices intended to help visually impaired individuals.¹⁴ A pair of hard-of-hearing sisters shared that they are unable to access hearing devices in Gaza due to supply difficulties. As a result, they cannot hear when bombings occur, leaving them feeling scared and helpless.¹⁵ Some people have fled Gaza due to the conflict. However, some people with disabilities are not able to bring their AHTs with them. For example, one report stated that the family of a three-year-old with cerebral palsy had to leave his assistive device and medications behind when they fled their home. As a result, the child has been experiencing painful muscle spasms ever since the family evacuated.¹⁶

Despite the challenges children with disabilities in conflict zones face in accessing assistive technology, there have been

efforts to help address this issue. UNICEF has helped reduce the cost of assistive technology for children with disabilities in middle- and low-income countries and in conflict or emergencies. The children’s fund helped provide hearing aids for nine-year-old twins who fled their home in Ukraine with their family after the conflict destroyed their school. UNICEF has also helped provide 5,870 children with disabilities with assistive technologies.¹⁷ It has also helped children living in conflict in Syria access assistive technology. This includes a seven-year-old Syrian girl who became paralyzed by a bomb. UNICEF provided the girl with a wheelchair to help her gain more mobility. Currently, the fund offers eight different types of wheelchairs and five different types of hearing devices to people with disabilities in middle- and low-income countries and in emergencies. However, UNICEF plans to expand the assistive technologies it offers in 2024.¹⁸

Researching different armed conflicts across the globe to understand better the difficulty in fleeing attacks, lack of educational access, and challenges accessing humanitarian necessities and AHTs for disabled children is essential for the

¹³ Mallory Moench, “People with Disabilities in Gaza Suffer in Israel-Hamas War,” *TIME*, November 5, 2023, <https://time.com/6331630/israel-hamas-war-gaza-disability-barriers/>.
¹⁴ Moench, “People with Disabilities in Gaza.”
¹⁵ Moench, “People with Disabilities in Gaza.”
¹⁶ Moench, “People with Disabilities in Gaza.”
¹⁷ “How assistive technology restores dreams for children with disabilities amid adversity and conflict,” UNICEF, November 30, 2023, <https://www.unicef.org/supply/stories/how-at-restores-dreams-children-disabilities>.
¹⁸ UNICEF, “How assistive technology restores dreams.”

development of this committee. Identifying these variations will make creating and elaborating solutions to these challenges possible.

AI and Assistive Health Technology

The World Health Organization (WHO) recognized the quick rise of artificial intelligence with an official publication in October 2023. This outlined regulations on AI in the healthcare sector. In this publication, WHO notes that using AI systems could benefit patients, fostering relationships between developers, manufacturers, patients, and healthcare professionals. These new AI data tools based on analytic techniques can potentially transform the healthcare industry, including AHT. It is essential also to consider the potential dangers of AI systems' access to health data and privacy. Other AI concerns include the quality of data collection and biases in model or algorithm development. Some others are ethical concerns and accountability. As well as effectiveness in a clinical setting and social concerns regarding job elimination.¹⁹

Artificial Intelligence can lead to new developments in AHT. For example, AI can create smart wheelchairs and walking sticks. AI can also help visually impaired individuals by turning images into sounds. It can also be used to develop AHT for individuals with cognitive disabilities. This could include those with autism, dyslexia, and attention deficit disorders.²⁰ AI Assistive Technologies can play a significant role in helping students with disabilities. AI-powered language processing devices can provide real-time captioning and transcriptions for students with hearing impairments. This AI model can further break down language barriers with its transcription service, including sign language.²¹ Other AI-powered models can also personalize job-hunting and assistance to those with disabilities. These models can also make tasks automatic and provide adaptive needs for workers with disabilities. This

will further enable workplace accommodations.²² AI can also be programmed into the home environment in smart home devices with the ability to control various aspects of the house (e.g., turning on lights and adjusting the temperature).²³ In addition to providing benefits for people with disabilities, AI in developing AHT can help boost economies. It is estimated that by 2030, assistive technology will have a global market worth USD 31.22 billion when factoring in AI algorithms.²⁴

Sadly, many people still cannot access these technologies. According to the World Health Organization, one billion people who need AHTs cannot access it. The number of people who need AHTs will rise to 3.5 billion by 2050.²⁵ Over the years, assistive technology adoption and development have needed more support from venture capitalists and economic ecosystems. One reason is that AI and assistive technologies demand a lot of resources and are difficult to sustain in the long run compared to other emerging technologies in which venture capitalists could invest their money. Modern technology is often incompatible with existing infrastructure when it comes to meeting the needs of those with disabilities. Another reason there needs to be more investment in the development of AHTs using AI is that there is limited data that developers can use to persuade. This is because people with disabilities have had limited access to education, work, and healthcare through the years.

For this reason, there has been little data collected on people with disabilities and the impact AHT has or could have on their lives. AHT also has a wide range of stakeholders because it is often used by families and caregivers of individuals with disabilities in addition to those who have disabilities themselves. This also makes the research more complex. Other challenges include AI model limitations, the slow adoption and development cycle of AHT, policies, and

19 WHO *Outlines Considerations for Regulation of Artificial Intelligence for Health*, (Geneva: World Health Organization, October 19, 2023), <https://www.who.int/news/item/19-10-2023-who-outlines-considerations-for-regulation-of-artificial-intelligence-for-health>.

20 Yonah Welker, "How sovereign funds could empower the future of assistive technology and disability AI," *The European Sting*, August 16, 2023, <https://europeansting.com/2023/08/16/how-sovereign-funds-could-empower-the-future-of-assistive-technology-and-disability-ai/>.

21 "The Rise of AI in Accessibility Services," *CaptioningStar*, November 22, 2023, <https://www.captioningstar.com/blog/the-rise-of-ai-in-accessibility-services/>.

22 Ana Sofia Gala, "AI Accessibility: What Are AI Assistive Technology Examples?" *Hand Talk*, August 6, 2023, <https://www.handtalk.me/en/blog/ai-accessibility/>.

23 Nazar Kwartalny, "How to Use AI for Smart Home Technology," *Inoxoft*, November 24, 2023, <https://inoxoft.com/blog/how-to-use-ai-for-smart-home-technology/>.

24 Welker, "How sovereign funds could empower the future of assistive technology?"

25 Welker, "How sovereign funds could empower the future of assistive technology?"

compliance with legal frameworks and human rights criteria.²⁶ Its impact on developing countries is increasing, and the potentially beneficial aspects of AI in assistive technology are overall absent. AI in healthcare primarily focuses on first-world countries with the resources to support development. In contrast, developing states need more immediate access to the AI assistive technology market and the legislative power to improve its adoption. AI can additionally recognize particular text within images for image recognition, facial recognition, lip reading, navigation, and information retrieval/summarization. There are also more direct approaches to AI assistive technology, such as smart glasses or AI-powered prosthetics. These are typically more cost-effective for people with a wide range of disabilities and could potentially be the opening for developing states to benefit from.

Assisted technology utilizing AI is not just limited to physical impairments. AI-assisted therapy has taken root in treating depression and anxiety—and has shown to be successful. Eleos Health, a mental health start-up, recently conducted a clinical trial displaying that with AI-supported therapy, patient attendance was twice higher, and symptom improvement was three to four times better than treatment as usual. This provides relief from the stress of workforce shortages, as AI can give feedback to therapists to guide future sessions and create preliminary notes for documentation—all so therapists can maximize face-to-face time with clients without the administrative burden.²⁷

Professor Eshed Ohn-Bar at Boston University has introduced an AI-powered language service—called ASSISTER—that verbally directs individuals with visual impairments to their desired destination. This AI model analyzes the obstacles in an individual's pathway and plans a successful path. ASSISTER helps individuals who struggle with leaving the house, which affects their quality of life, and allows them to go out for free leisure without inconveniences. Notably, AI and computer vision struggle with registering images and

humans with disabilities. There is a significant lack of research when considering teaching machines to recognize individuals with disabilities. Therefore, ASSISTER, unlike other AI models, is coded to mimic natural human interaction instead of automated guidance. The ASSISTER team hired mobility guides to fine-tune ASSISTER's natural interaction and used video and audio data to train the AI program. Ohn-Bar then tested ASSISTER in diverse environments and scenarios to further understand and progress his model. Currently, ASSISTER is in the works for a smartphone application that is a portable support system accessible to anyone.²⁸

Questions regarding AI's lack of acceptance and ethical considerations in developing countries have also paused further advances. An example is the potential concern of making specific jobs unnecessary. Or how the government will manage sensitive data. It is essential for developing countries to adopt particular policies that align with national interests and goals. Developing countries, such as India, Brazil, Mexico, South Africa, and a few countries in the MENA region (Egypt, Tunisia, and Jordan), aim to participate in the rise of global AI. They want to prepare specific AI national strategies designed for developing countries. They are opposing the national strategy for developed countries. The developing country's plans focus on building human expertise in AI. In addition, I participate in AI international and regional conferences. Also, integrating AI in business and entrepreneurship, upskilling technological employees, developing ethical policies and legislated reforms, and creating AI educational courses.²⁹

Outside of assistive technology but still in scope for healthcare, AI makes its presence known in radiology, cancer care, and enhancing productivity in the workforce. AI applications can fill gaps in medical worker shortages through AI-based diagnostic testing. The opportunities AI can bring to developing countries strengthen national competitiveness. At the same time, AI supplements areas of need and provides opportunities for education and employment. However, there

26 Welker, "How sovereign funds could empower the future of assistive technology."

27 Eleos Health, "Study: AI-Assisted Therapy Shows Superior Depression and Anxiety Outcomes Versus Standard Treatment," Press release, July 11, 2023, <https://eleos.health/press-releases/ai-therapy-improves-patient-outcomes/>.

28 Zoe Tseng, "Advancing Assistive Technologies with AI," *Boston University*, Last modified April 24, 2023, <https://www.bu.edu/hic/2023/04/24/eshed-ohn-bar-advancing-assistive-technologies-with-ai/>

29 M Demaidi, "Artificial intelligence national strategy in a developing country," *AI & Soc*, October 2023, <https://doi.org/10.1007/s00146-023-01779-x>

are critical strengths and weaknesses when integrating AI with healthcare—and assistive technology—in developing countries, as seen in the pertinent, rising AI leader India. The strengths of India becoming a leader in AI adoption are its emerging engineering talent pool and availability of data³⁰. Its weaknesses are the need for more trained personnel and expertise in AI development, data mining, and management, the high resource cost, the low availability of tools, quality control, and the global digital divide. The digital divide is an international phenomenon that describes the widening gap between the billions who benefited from the internet and the other billions who lack access to the internet. Developed countries with substantial access to the internet and high-speed networks have an easier time embracing and investing in the rapid rise of AI. In contrast, developing countries have yet to make significant milestones in internet access and technology to capitalize on AI usage. Other developing countries like Thailand also have disadvantages when integrating AI technology into healthcare and public health systems. Thailand has an increasingly aging society that requires further specialization when it comes to AI adoption. The application of AI technology must have a careful design that accommodates older people, which can strain Thailand's limited government budget.

Government agencies must review the costs and resources required for AI implementation—and the consequences of investing. For now, Thailand has introduced the idea of “smart hospital” policies that raise the standard of health services through AI for analyses and diagnoses.³¹ There are general challenges to fully introducing AI to developing countries, especially in healthcare. Furthermore, developing countries must improve internal stability to implement this newer technology effectively, requiring a separate, more detailed approach to AI integration.

Conclusion

For this committee, research needs to be done in different areas. Starting with armed conflicts worldwide and how different

circumstances in these issues can result in difficulty in fleeing from attacks. In addition, how the lack of access to education and other challenges when accessing humanitarian needs and AHT for disabled children is essential. Previous protocols and resolutions have established rules and regulations regarding children with disabilities in armed conflict areas. However, new proposed actions must understand the framework for evaluating these challenges associated with the main issue. Whatever is built within this committee may also be a worthy template for global solutions. An example of research worth looking at is the example of Meta, Colombia. Here, the experiences of children with disabilities and their families can help understand the firsthand experience of disabled children in armed conflict zones. This case can help craft comprehensive, realistic, and well-thought-out actions.

On another note, on a global level, technology is disproportionately advanced. First-world countries have become more acclimated to the technology boom as AI becomes increasingly transparent in its limitations and potential. They are more receptive to leading and implementing AI due to more significant resources. This leaves countries with fewer resources and unable to compete in the global healthcare market and adequately address the rising pressure for assistive health technology, which has been shown to benefit from AI use. AI has the evident power to become an effective tool to bring about an equitable world regarding assistive health technology and people with disabilities. It runs the risk of poor allocation and relies heavily on the global market. By acknowledging the difference in needs and access to technology between first-world and developing countries, companies and governments have begun moving forward with more concrete foundation plans for AI adoption in countries like India and Thailand.

30 Abhishek Mahajan et al., “Artificial intelligence in healthcare in developing nations: The beginning of a transformative journey,” *Cancer Research, Statistics, and Treatment* 2 No. 2, December 2019, (182-189), DOI: 10.4103/CRST.CRST_50_19

31 Praditporn Pongtriang, Aranya Rakhab, Jiang Bian, Yi Guo, and Kitkamon Maitree, “Challenges in Adopting Artificial Intelligence to Improve Healthcare Systems and Outcomes in Thailand,” *Health Inform Res.* No. 3, July 31, 2023, (280-282), <https://doi.org/10.4258/hir.2023.29.3.280>

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