VOLUME 1 | ISSUE 7

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Global Health: Annual Review

Photo Courtesy of Kaleigh Beauvais

McMaster
University

Land Acknowledgement

Global Health: Annual Review (GHAR) is a student-led, open-access, and peer-reviewed journal housed at McMaster University. Before delving into this year's issue, we want to take a moment with you to give honour and thanks to the Haudenosaunee and Anishinaabe nations who are the traditional inhabitants of the lands upon which McMaster University stands. We acknowledge the enduring presence of First Nations, Inuit, and Métis people on Turtle Island, and as guests, we are fortunate enough to live, work, and learn on their beautiful land.

Through GHAR, we hope to highlight and engage in some difficult conversations about global inequities, and while that might seem divorced or separate from Indigenous issues, the reality is that the struggle for Indigenous rights and sovereignty is deeply connected to all global health work. We understand that GHAR is an academic undertaking, and that traditionally, systems of academia and research have been levied to further dispossess Indigenous people of their territories and take away their self-determination rights.

Today, we stand in solidarity with Indigenous people all around the world who are fighting for their freedom and sovereignty.

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Photo Courtesy of Maya Kshatriya

Letter to the Reader

Dear Reader,

Welcome to the seventh issue of the Global Health: Annual Review (GHAR). GHAR is a student-led open-access journal housed at McMaster University. Through the journal, students, graduates, and young professionals in the field of global health are able to share their work, increase its reach, and broaden its impacts. GHAR is the brainchild of the alumni of the Master of Science in Global Health Program at McMaster University, who wanted a platform for sharing scholarly work internally amongst students. Since its inception in 2015, GHAR has expanded substantially to include the larger global health community in its contributions and scholarship.

For Issue 7, the editorial team furthered GHAR's progress and made some significant changes. We continued to implement a double-blinded peer-review process and are facilitating workshops for researchers and new scholars to ensure success when submitting to GHAR. We are proud to present an issue of 27 pieces total, including research articles, opinion editorials, reflective narratives, and art-based submissions for your enjoyment and learning.

The global health field is diverse and encompasses numerous realms, and our issue this year is reflective of this very reality. We focus mainly on seven key areas: Colonialism in Global Health, COVID-19, Environmental Health, Globalization & Governance, Health Equity, Health Policy & Systems, and Social Justice & Human Rights.. These themes are not static, rather, the work contained within them has been curated intentionally to highlight their intersectionality and interplay with one another.

We have spent close to a year crafting this newest issue for you – we hope its insights nourish your knowledge, inspire your learning, and furnish your curiosity. Creating this issue has been an undertaking catalyzed and pronounced by your continued interest and support in our journal.

On behalf of the authors, contributors, and the entire editorial team, we offer you our thanks and immense gratitude.

Sincerely,

Global Health: Annual Review Editorial Team, Issue 7

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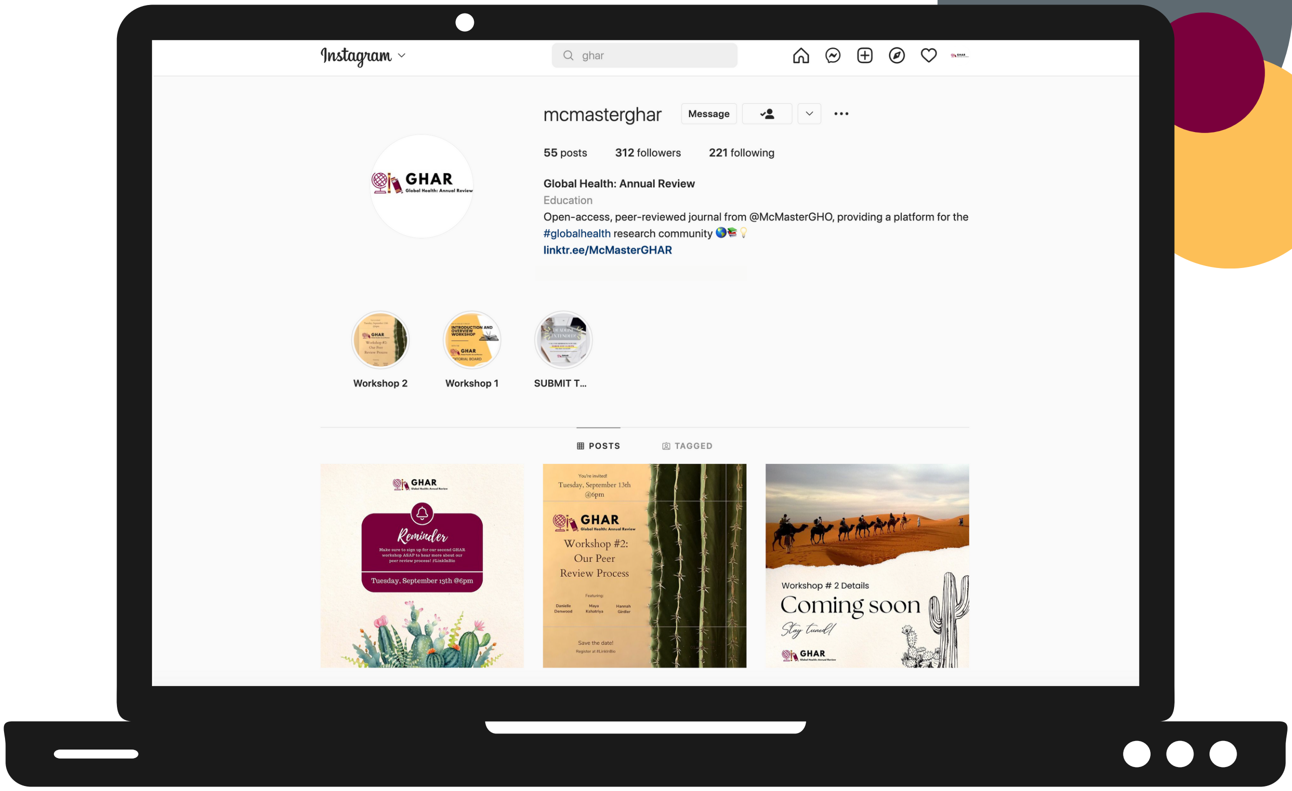

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THANK YOU FOR YOUR CONTRIBUTIONS TO THIS YEAR'S JOURNAL.

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WORKSHOP SERIES

OF 2022

GHAR continues to active role in facilitating the learning of new researchers and authors. In collaboration with global health leaders and community members, our team put together three virtual workshops centred around different aspects of the writing and publication process.

INTRODUCTION

The GHAR Editorial Board of Issue 7 kicked off the workshop series with an introduction to the peer-review, student led journal.

#1

OUR PEER REVIEW PROCESS

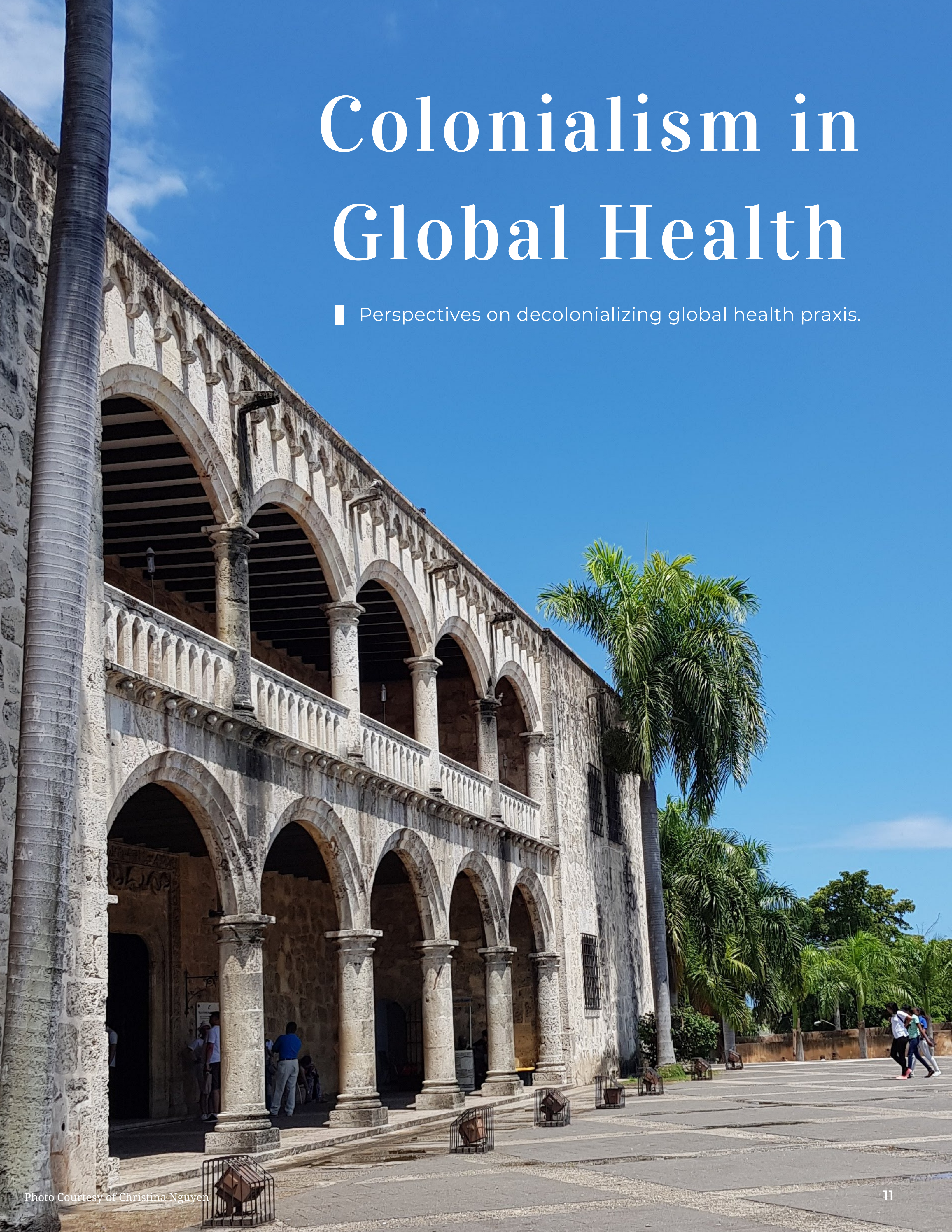
Guest speakers Maya Kshatriya and Hanna Girdler guided prospective contributors through details of our peer review process and shared their expertise.

#2

PREPARING YOUR SUBMISSION

This workshop will guide potential authors through the submission process and give tips on how to ensure their submission is GHAR ready. Date to be announced.

#3



Colonialism in Global Health

Perspectives on decolonializing global health praxis.

Photo Courtesy of Christina Nguyen

OPINION EDITORIAL

Decolonizing dermatology: a path towards health equity

Leah Sarah Peer, Saint James School of Medicine, Peer Medical Foundation; **Malik Ammad Iqbal,** Peer Medical Foundation; **Anna Yang**, University of Toronto, Peer Medical Foundation; **Sathurthika Selvanayagam,** McMaster University, Peer Medical Foundation

Across the globe, the COVID-19 pandemic exposed the racial inequities and health disparities prevalent in our societies. Racism is a causal factor contributing to negative health outcomes and although healthcare professionals have begun to grapple more overtly with its impact on the treatment and care of patients, a particular emphasis has been placed on a field in medicine that focuses on skin – dermatology [1]. At the beginning of the pandemic, physicians treating people of color (POC) noticed a dearth of racial diversity in the COVID-19 literature, namely for images of “COVID toes” [2,3]. The lack of racial representation in educational materials and the inadequate skin manifestations of POC suggest that disparities have existed in dermatology for decades. Within the healthcare system as well as in the communities physicians serve, racism is a well-documented issue with measurable impacts on treatment, patient satisfaction and positive health outcomes [4]. This article provides an understanding of racial inequities in dermatology education, the impact of inadequate training on patient experiences as well as recommendations to counteract the institutional racism embedded in medicine.

The lack of resources for dermatology education and training affects medical students' knowledge and awareness of skin manifestations of diseases. The assessment and quantification of skin color is an indicator of overall health linked to oxygenation, tissue perfusion, nutritional status, and injury [5]. Based on these assessments, clinicians make decisions multiple times each day, gauging tissue perfusion and concerns for jaundice, pallor, cyanosis, and the blanch response. They evaluate pressure points for early signs of skin breakdown and assess existing wounds for colour changes that might indicate healing, worsening, or infection. Physicians who have not been trained using images of these conditions in dark skin tones are much more likely to misdiagnose POC [2]. An analysis of dermatology textbooks by Jules Lipoff found that only 4-18% of images contained pictures of dark skin while an audit of the first and third year dermatology curricula at the University of Toronto, Temerty Faculty of Medicine revealed that 3.7% and 6.06% of the images, respectively, displayed skin conditions in skin of colour (SOC) [1,2]. Furthermore, a systematic review examining articles that mention the cutaneous manifestations of COVID-19 found no photos of skin of Fitzpatrick types V and VI and very few images of Fitzpatrick type IV (6%) [6]. A notable exception to this otherwise consistent pattern of representation in educational materials is that dark skin tones are more often used in textbooks to depict sexually transmitted infections, while 28% of images of infectious diseases in general used images of SOC, the proportion was twice as high for sexually transmitted infections in particular [2]. This concerning pattern carries a significant risk of inadvertently reinforcing prejudicial biases among healthcare providers regarding POC, which compounds the existing failures of the field in providing equitable care for racial minorities.

There is ample evidence that these deficiencies of racially diverse imagery in educational materials have resulted in medical students and physicians being poorly prepared to treat patients of color. For instance, a survey of dermatologists and dermatology residents' diagnostic preparedness revealed that 47% feel inadequately prepared to treat Black patients [6]. Thus, alongside a lack of representation and diversity in dermatology, inadequate research and training contributes to misdiagnoses and worsened prognosis in several POC patients.

Another study from LSU-SOM New Orleans tested 14 medical students competency in diagnosing dermatological pathology in SOC. A pre-intervention questionnaire was presented to test students' diagnostic abilities followed by an educational training module. The pre-intervention competency was then compared to post-intervention competency paired with a t-test. Data revealed that increased exposure to pathology on brown (p=.0001) and black skin (p=.0011) (as defined by the Fitzpatrick Scale), results in greater confidence in diagnosing pathology in this population. Participants' confidence in ability to diagnose eczematous lesions (p=.006), psoriatic lesions (p=.0032), melanoma (p=.0261) and basal cell carcinoma (p=.0028) was significantly increased after the educational module. In a systematic review on skin cancer, due to the low incidence of skin cancers in darker skinned groups caused by photo-protection from epidermal melanin (35–45% of all neoplasms in Caucasians, 4–5% in Hispanics, 2–4% in Asians, and 1–2% in Blacks in the United States), when skin cancer occurs in POC, patients often present with an advanced stage, and thus, have a worsened prognosis in comparison to Caucasian patients. However, certain types of skin cancer such as dermatofibrosarcoma protuberans, predominate in POC along with basal cell cancer, squamous cell cancer, melanoma, cutaneous T-cell lymphoma, and Kaposi sarcoma which are typically present in POC [7]. This racial disparity places unique challenges on members of Black, Indigenous, and POC (BIPOC) communities due to the racial biases that cause healthcare providers to distrust their patient's description of signs and symptoms.

The therapeutic relationship between dermatologists and patients suffers when providers have a lack of knowledge or awareness about issues affecting POC. SOC patients with acne vulgaris, melanoma, psoriasis, cellulitis, vitiligo, eczema and pityriasis rosea have expressed dissatisfaction with the care received as they felt their provider was ill-equipped to treat them [8]. A study on Black patients seen in both a SOC clinic (SOCC) and a non-SOCC shows that they were poorly diagnosed and treated in a non-SOCC [9]. They reported being disrespected, misunderstood, erroneous and that the non-SOCC dermatologists had significant difficulties diagnosing abnormalities in SOC and Black hair.

Efforts to eliminate the racism embedded in medicine requires the efforts of all stakeholders who are committed to ensuring health equity. These include the incorporation and integration of more images of SOC into educational resources, the revision of the medical curriculum to teach about race and its intersections of health, and the review of journal publishing guidelines to allow for diverse SOC images. We would like to emphasize the need for educational institutions to collaborate with community health organizations to ensure culturally competent physicians [6,9,10]. The Peer Medical Foundation (PMF) is a youth-led non-profit organization advancing health equity, inclusivity, diversity and racial justice in medicine [11]. PMF has hosted a "Decolonizing Dermatology" workshop series that discusses the barriers faced by POC and has also ensured the provision of resources such as multilingual guides on skincare for dark skin tones for healthcare professionals and patients. These efforts strive to empower both patients and providers with information to address these racial inequities with education and advocacy [11].

Considering the systemic racial disparities in dermatology, it is essential to combat the inequities in medical education by empowering health professionals with training, tools and knowledge to provide equitable, safe, and compassionate care to every patient. SOC patients deserve the highest quality of care from adequately trained healthcare professionals. Given the racial disparities that exist in dermatological education, and the consequences of these inequities on the healthcare experiences of patients of colour, we must strive to make dermatological education more inclusive of all SOC's to achieve health equity for all patients everywhere.

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OPINION EDITORIAL

Abolition, global health, and the urgent need to decolonize and recenter communities

Stephanie Wiafe, MPH; **Madilyn Darrach,** MPH

Global health institutions in the North, situated on stolen Indigenous lands and waters, have begun admitting the realities of neocolonialism and racism in their governance, practice, and research. However, approaches towards transformative justice for the communities, which the global health paradigm has caused through its extractive, exploitative, and racially violent nature, are virtually absent. Now that colonialism has been named in the global health sector, there is an urgent need to dismantle, reimagine, and rebuild approaches to global health through the lens of abolition.

Abolition and global health praxis

Abolition provides a vision and an analysis of structural oppression and structural power; it is a framework for addressing harm and dismantling, reimagining and rebuilding. It lends the possibility of new structures, collective action, wellness, healing, health, and accountability. [1] From enslavement, police, and prison abolitionist movements, we have learned that naming colonialism, racism, and oppression in our institutions and sectors is not enough, especially as they continue to cause violence and harm [2]. We ask the sector: what is the purpose of naming colonialism in global health governance, practice and research without a movement to urgently redistribute power and seek justice for those harmed, led by the individuals and communities most affected? The power imbalances in the global health sector are stark and indisputable. [3].

Predominantly white countries, institutions and researchers hold decision-making power at every level. They ultimately set the agenda and the budget for the issues (said issues often rooted in historical and current exploitation and violence to communities perpetrated by the global North) to prioritize in addition to how and whom will address them. They decide which communities will be the "target populations" for interventions. Predominantly white-led groups and organizations extract information, experiences, and stories from folks in the Global South for publication, presentation and distribution in the Global North, ultimately, for profits, funding, notoriety and more power [4]. This extractive cycle is neocolonial. Neocolonialism, much like colonialism itself, is violent, racist, and oppressive [4].

Abolition does not stop at naming the cycle of neo-colonial violence, oppression and racism in global health governance, practice, and research. Abolition provides a framework to critically decolonize and decentralize systems. It lends the analysis of the root causes of global health inequities between the North and the South, with history in mind. It prompted Abimbola et al. to ask the question: "Can global health be equitable when the world itself is not?" [5], which is a prompt to hold global health decision-makers, practitioners, and researchers in the global North accountable for pervasive power asymmetries and injustices that are exacerbated by the nature of the sector.

How COVID-19 exposed the violence of colonialism and capitalism

We need not look far to find instances where global capitalist and imperialist structures have caused continued harm to communities in the so-called Global South. In the early days of the COVID-19 pandemic, public health messaging and news outlets rang out feel-good sentiments that "we are all in this together" and encouraged us to socially distance, mask, and take care of one another. Two years later, it is incredibly clear that "we are all in this together" could not be further from the truth. We were never all in this together.

When vaccines were made available, countries in the Global North began hoarding them. These countries drew a line in the sand, siding with the profit-driven interests of multinational pharmaceutical firms by refusing to sign the TRIPS waiver [6], which would ensure expedited and equitable access to the lifesaving COVID-19 vaccine for countries in the Global South. Those violent lines in the sand are also known as borders. Harsha Walia in *Border and Rule*, positions borders as a source of violence for oppressed and repressed communities across the world - borders are key to maintaining colonial rule and solidifying capitalist, nationalist interests and preserving imperial power [7].

Those lines in the sand scar not only our land but our social imagination. The prison industrial complex continues to demarcate society across racialized lines. Angela Davis in *Are Prisons Obsolete?* tells us that "the ideological work that the prison performs—it relieves us of the responsibility of seriously engaging with the problems of our society, especially those produced by racism and, increasingly, global capitalism." [8]

Though incarcerated individuals remain a high risk population for contracting COVID-19 (due to inhumane carceral living conditions), as well as experiencing severe symptoms, public health messaging in the North widely omits that reality. [9] For example, the Government of Canada does not list incarcerated individuals as "people who are at risk of more severe disease or outcomes from COVID-19," though scientific evidence tells us otherwise. [9] [10].

Borders, much like prisons, are a tool of colonialism and capitalism to justify neglect and harm - they're utilized as a mechanism for dehumanization. The true cause of harm and violence is not what happens within prisons and within borders, it is in the very nature of their existence.

Global health institutions exist, operate within, and uphold this paradigm of borders, prisons, and global capitalist violence. Equity-based responses to these harms are not transformative nor systemic. Downstream reactions will never replace the value of true, radical transformative change. It is time for justice.

Calls to Action

Following the direction of communities, namely BIPOC (Black, Indigneous and People of Colour) communities, our call is to divest from global health entities and structures that uphold colonial practices and gate-keep transformative justice and reparations for communities oppressed by global health funding, practice, research and governance.
We call on those who hold power in the field of global/public health to:

1) Acknowledge the power imbalances that exist in the global health sector (in research, profits, funding, decision-making, authorship, governance, "informed consent" of individuals and communities etc.) between predominantly white and Northern regions and Black and Brown Southern regions;

2) Divest from global health research, programming and projects that enact harm – such as unsustainable, extractive and exploitative practices that subject communities to racism and racial trauma;

3) Divest from global health work and organizations that perpetuate ideologies and practices of racism, racial trauma, colonialism and imperialist interventionism;

4) Divest funds from predominantly white organizations and invest in community-led organizations and groups in regions where health inequities persist;

5) Re-focus global health investments into communities most affected by health inequities, not as charity, but as reparations and transformative justice for historical and current colonialism and exploitation;

6) Invest in community-led and community-based groups and organizations who address the root causes of global health inequities through an intersectional lens;

7) Align global health praxis with the abolitionist movement.

The power of abolition is not just in recognizing violence but in dismantling the very systems that create it, and investing in communities to ultimately construct a new vision for the future, where health is a human right and a form of justice. We leave with the apt words of Harsha Walia: ”Empires crumble, capitalism is not inevitable, gender is not biology, whiteness is not immutable, prisons are not inescapable, and borders are not natural law.”

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COVID-19

A look into the global impacts of the COVID-19 pandemic.

Photo Courtesy of Serena Tejpar

REFLECTIVE NARRATIVE

The failure of Ontario public health messaging and how vaccine hunters Canada stepped up

Tavishi Weeraratne, McMaster University; **Kelly-Anne Dela Cueva,** McMaster University

Coronavirus disease 2019 (COVID-19) has created an immeasurable amount of pain and suffering across the globe. In Canada, the development and procurement of COVID-19 vaccines in a short period was hailed as a light at the end of the tunnel; however, getting the vaccines into the arms of Canadians was proven to be another challenge due to inconsistent vaccine supplies, varied eligibility criteria across Canada's different public health units, and misinformation about the different vaccines. Ontario initially lagged behind many provinces in vaccine distribution. When adults (age 18 years and older) were eligible, it was nearly impossible to book a vaccine since the system was poorly organized that it led to long wait times [1,2,3]. Waiting hours to book a vaccine through the provincial portal was frustrating, especially when available dates were quickly getting booked up and the provincial booking site was crashing. The process of booking vaccines for our grandparents and parents was proven to be difficult as there were numerous barriers associated with navigating the online portals independently. This led to many receiving a later appointment date despite the increased vulnerability. Furthermore, the province failed to provide clear and timely updates on the vaccine rollout plan [4,5]. They also made contradictory statements leaving the public confused, leading to a greater spread of COVID-19 and vaccine misinformation [4,5].

Due to the frustration many individuals faced regarding Ontario's vaccine roll out, Vaccine Hunters Canada, a volunteer-based initiative was created to help Canadians get vaccinated against COVID-19. Andrew Young initially started this volunteer-based community within Ontario to get individuals vaccinated, however, it quickly expanded across the nation [6]. Vaccine Hunters Canada stepped up when the province of Ontario and different public health units failed to make the vaccine booking system accessible. Vaccine Hunters Canada helped Canadians through numerous social media platforms such as Discord and Twitter, an online group chat/forum to broadcast vaccine information. At its peak, the organization had about 427,000 followers across its platforms [6]. Volunteers answered questions about eligibility and safety, but most importantly, they chased down, in real-time, the elusive whereabouts of vaccine doses. The Ontario government should have stepped up to increase accessibility with booking vaccine doses; however, it was through an independent, nonpartisan, volunteer-run community that enabled us and many community members to get their vaccines.

While Ontario public health news failed to engage with the public about vaccine access, Vaccine Hunters Canada filled in the gap. They played a crucial role in informing Ontarians about the urgency of being vaccinated. This was particularly evident around April 2021 to June 2021 when the first dose was made available during Phase 2 of the vaccine roll out [7]. Phase 2 involved mass deliveries of vaccines distributed through mass immunization clinics and mobile teams to reach high-risk congregate settings, essential workers and people living in hot spot communities [7].

We, the authors, felt the mix of anxiousness and urgency to receive our vaccines as individuals living in hot spot communities. This was when we started to see more activity from Vaccine Hunters Canada through Twitter and Discord to address the increased amount of eligible people. We turned on our notifications from their account to get immediate updates on open clinics in certain postal codes, mass immunization clinics, and availability of leftover vaccines. Not only did we use Vaccine Hunters Canada, but it became a collective effort among our peers to inform each other and book vaccines using the links provided. Vaccine Hunters Canada's operations through their social media presence, quick updates, and interactive approach developed a strong sense of community amongst Canadians in seeking and obtaining their COVID-19 vaccines. Despite the stress throughout the pandemic and miscommunication or lack thereof from the Ontario government, Vaccine Hunters Canada proved to be a reliable source of information for many Canadians.

For future steps, in the case of a public health crisis, we should all keep in mind the importance of communication and community. The collective efforts of people to be informed and vaccinated, is the most effective way to control the situation and to prevent the spread of disease. Whether it is the government or a grassroots organization, such as Vaccine Hunters Canada, the ability to connect with the public through media can have a huge influence on the public's health perceptions and outcomes. With the ever-growing use of social media and its utilization in the healthcare space, it has become apparent that there is great value in creating an engaging space for social media users to receive health information. When using social media, it is important to be mindful of who receives the information, what impact the messaging has, and what changes in health behaviour and health outcomes can happen with the interventions [8]. Vaccine Hunters Canada ensured that the public, especially Discord and Twitter users, were able to receive information in a clear, concise, and timely manner. The various channels on the Discord app were managed by bots and dedicated volunteers to prevent the spread of misinformation and spam messages. Twitter was also an effective way to spread information about the vaccine rollout, especially through the retweet function that reached greater amounts of individuals beyond their followers. Through their outreach, they made an impact on informing the general public about vaccine accessibility. This resulted in changes in health behaviours and outcomes in which the Ontario public became more active in seeking vaccines thus improving the provincial vaccination coverage. We are truly grateful for the immense efforts that the Vaccine Hunters Canada team has provided for Canadians. Amidst the conflict and confusion between us, the public, and them, the Ontario government, throughout the pandemic, Vaccine Hunters Canada have demonstrated that it is not about "us versus them" but rather "us versus the disease."

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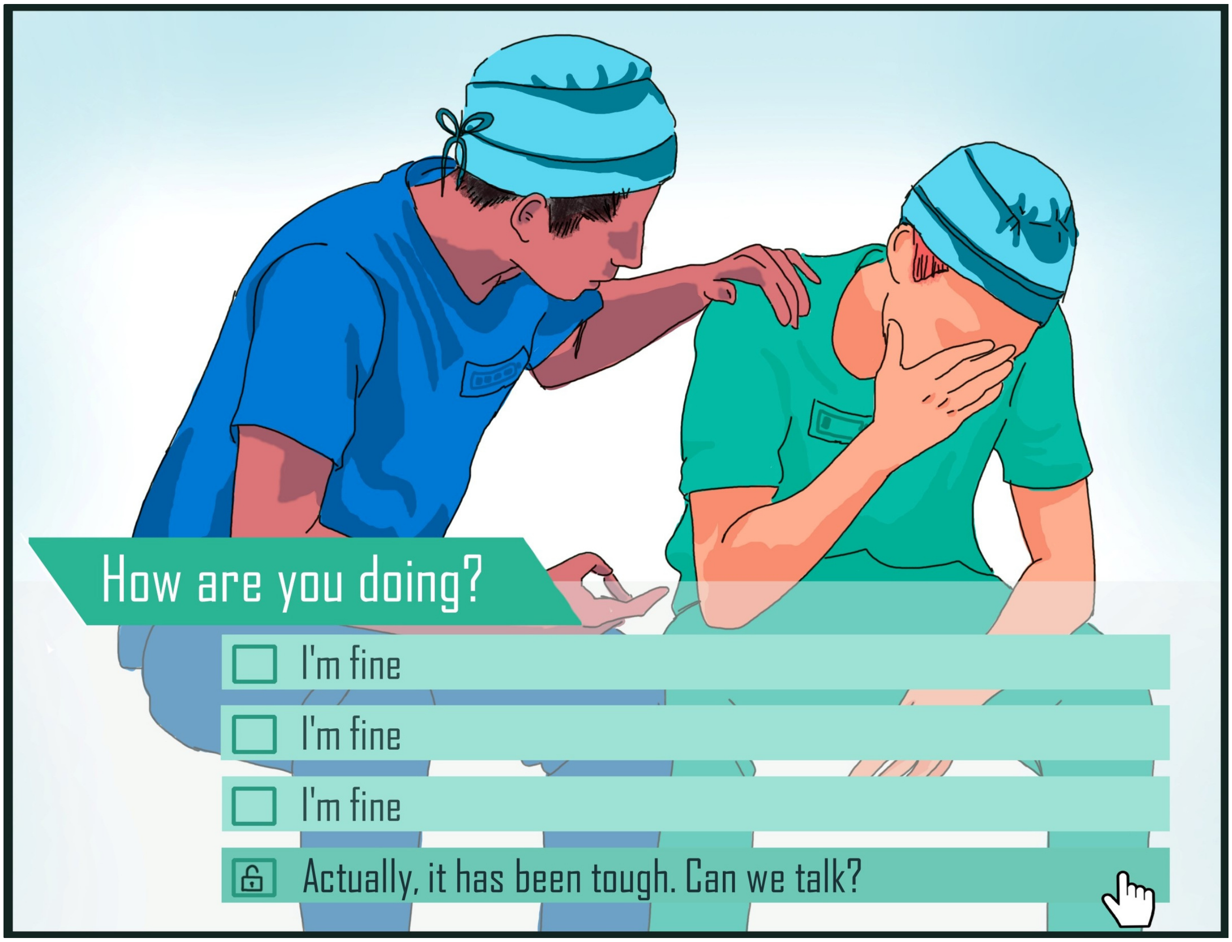
Burnout

Artwork Courtesy of Aruni Jayatilaka and Ruvini Jayatilaka



The inspiration behind this artwork is to show the prevalence of burnout in healthcare, across many disciplines, especially within the pandemic. By having a video game concept of a scenario, we portray various options for character responses. By having multiple options indicating “I’m fine”, it portrays how it can be difficult for us to recognize that we may be on road to, or currently experiencing, burnout. The last option of asking to talk signifies opening a discussion in recognizing burnout. The unlock symbol next to this option symbolizes that sometimes, recognizing and asking for help may not be an option we immediately select, but that it is important to trust yourself and colleagues in speaking up when experiencing burnout. That’s the option we are selecting and what we encourage everyone to consider.

OPINION EDITORIAL

Long-term Impact of the COVID-19 Pandemic on Intimate Partner Violence in Rural India

Vibhu Bhargava, McMaster University

Introduction

Intimate partner violence (IPV) is one of the most common forms of violence against women that continues to persist worldwide [1]. IPV includes physical, sexual, and emotional abuse and controlling behaviours by an intimate partner [2]. It impacts women of all ages, races, religions, and socio-economic backgrounds, as indicated by a systematic review encompassing 81 countries, which displayed a high prevalence of IPV in most regions of the world [1]. The state of Uttar Pradesh (UP) ranks the highest in India for IPV, particularly amongst married women living in remote regions [3,4]. COVID-19 has forced victims of IPV to socially isolate at home with their abusive partner, and little research has been conducted into understanding the unprecedented consequences of social isolation. As the pandemic continues to linger on, further investigation into this area is vital to help women who are socially isolated and face IPV. This article will discuss the long-term impacts of social isolation due to COVID-19 on intimate partner violence faced by married women living in rural UP, India.

The National Family Health Survey reported that 30% of Indian women between the ages of 15-49 have experienced violence by their male partner [5]. Women in rural UP villages are at an increased risk of exposure to IPV, due to factors such as low education levels, marriage at a young age, and entrenched gender inequalities that enable violence against women [2,6,7]. Traditional gender roles in UP society, enforce violence against women for choosing to deviate from their expected roles, as violence is deemed a strategy for conflict resolution [6,8]. In India, and globally, COVID-19 has had devastating impacts on all aspects of healthcare and society at large. COVID-19 is an acute respiratory syndrome coronavirus which first appeared in Wuhan, China [9]. The virus is transmitted from person to person via air droplets causing certain individuals to develop a severe respiratory illness that could potentially be life threatening [9]. Therefore, in the following months of the virus being detected, countries, including India underwent an extended lockdown to slow the viruses' spread [10]. Currently, there is a potential risk of a fourth wave in the country due to the Omicron sub-variants [9].

Prior to the occurrence of the pandemic, a study involving 225 villages in rural UP, indicated that one third of women were already experiencing violence by a male partner [6]. After the onset of the pandemic, a conceptual review explored the impact of social isolation due to COVID-19 and the rise of IPV in India [8]. A doubling in the number of domestic violence complaints by women was noted [8]. The pandemic has resulted in higher rates of alcohol consumption, unemployment, and job uncertainty, which has further provoked offenders [12]. The household has turned into an unsafe environment as social isolation has forced women to be confined with the perpetrator and seeking assistance from friends or neighbours has been challenging [5,8].

Long-term impacts of IPV

The inability for women to remove themselves from the place of conflict can impact their sexual and reproductive health in the long-term. Sexual violence is a form of IPV. Throughout the pandemic there has been a rise in coercive and non-consensual sexual practices, thereby increasing the rate of unprotected sex, forced sex, and marital rape [13]. Previous studies have linked such practices to reports of gynecological morbidity, pelvic pain, and pelvic inflammatory disease [7]. Sexual violence inflicted by the male partner can impact women's reproductive health by putting them at an increased risk for STIs [7]. Data from pre-pandemic studies indicate that in rural areas throughout India, symptomatic women are unlikely to seek out treatment for STIs [7]. However, the closure of clinics, disruption in care, and redirection of resources due to the pandemic, limit the availability of already scarce options for women [14]. This could have severe long-term implications for women's reproductive health, including fertility, down the line [7].

In rural areas in the states of Bihar and Maharashtra, verbal, physical and sexual IPV have been shown to generate mental health disorders within victims after sustaining longstanding violence [15]. Due to geographic similarities, it is possible to apply the outcomes of this study to rural UP. The experience of violence itself or the fear of potential violence is stressful, and women are at an increased risk for mental health outcomes such as: depression, anxiety, posttraumatic stress disorder (PTSD), sleeping disorders, suicidal ideation and attempts [15]. Often, women experiencing violence withdraw from social life to hide evidence of abuse or are forcibly isolated by their partners, which furthers their risk of mental health issues [15]. Social support systems remain inaccessible due to social isolation.

Recommendations

As the pandemic continues into its third year it is important that Indian government officials address the "shadow pandemic", which is how the WHO describes IPV during COVID-19 [16]. The Indian Ministry of Health must define IPV as a major public health concern and generate policy change to help support victims [17]. Furthermore, sexual and reproductive health services should remain open throughout the state, and services offered should expand based on specificity to each district and community within UP. Accessing health services for STI treatment could potentially translate to women accessing IPV-related screening or support services [18]. Finally, leaving an abusive partner needs to be seen as a valid option for women, which means shelter spaces must be available.

For mental health distress, helplines managed by local non-profit organizations would be the most accessible mode of communication, as internet access remains restricted in rural areas. Helplines would be a primary resource, and act as preliminary counseling and emotional support for women [17]. They would also be used to link individuals to further mental health resources in the community and establish a safety plan based on their unique situation [17].

Conclusion

IPV is prevalent in most regions of the world, and is especially prevalent in UP, India. The COVID-19 pandemic has exacerbated the crisis of violence against women, as they are forced to socially isolate with abusive partners to curb the spread of the virus. The long-term impact of social isolation due to COVID-19 on IPV faced by married women living in rural UP could be intensified if the appropriate measures are not immediately introduced. Specifically, concerns regarding the burden of disease associated with STIs related to coercive sexual practices and the impact of violence on the mental wellbeing of victims. It is important that governments create adequate policies and support local organizations to reduce IPV faced by women living in rural UP.

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OPINION EDITORIAL

Palliative care during the COVID-19 pandemic: An examination of gaps across global health systems

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Background

Due to the rapid spread of SARS-CoV-2 infection, the COVID-19 pandemic has resulted in hospital surges, strain on care systems, and increasing demand for health professionals. The overwhelming demand for care led to rationing practices among resources and personnel [1,2]. For emergency hospital admissions, patients were triaged based on the likelihood of their survival due to resource shortages [1,2]. The duration and scope of this pandemic exposed gaps within the global health system, notably in the field of palliative care [1,3]. During the COVID-19 pandemic, barriers for health professionals, ethics at the end of life, differential access to palliative care, and integration of culturally informed patient support have become apparent.

Health professionals and palliative care

The COVID-19 pandemic has introduced barriers for health professionals supporting patients at the end of life. These include challenges due to work-related restrictions, staffing redeployments and workers' deteriorating mental health.

Prior to the pandemic, multi-disciplinary teams sought to reduce the fragmented care that patients experienced at the end of life [4,5]. Their goal was to clarify ambiguous definitions and integrate experiences at the end of life across diagnoses, age, and culture and improve fragmented care delivery between health providers [4,5]. By addressing these components, health professionals were taking steps to improve communication, to include families in care delivery through the grieving process, and to prioritize spiritual, cultural, and psychosocial aspects at the end of life [4,5]. However, the COVID-19 pandemic compounded many existent issues in the palliative care system. Safety protocols, which aimed to limit transmission of the virus, had the consequence of restricting families and allied health from supporting loved ones and patients, respectively. Consequently, this impacted patient well-being, which reduced the quality of care delivered at the end of life.

Many health professionals who were re-deployed to support patients in critical condition lacked the education and skills fundamental to palliative care: knowledge of symptom management, experience communicating updates to family members, and insight to guide loved ones through the grieving process at the end of life [6]. In some instances, palliative care specialists were recruited to provide education on symptom management and communication strategies to physicians and nurse practitioners [7]. Given the high volume of critical condition patients, palliative specialists who ought to be caring for patients were suddenly focusing their efforts on training other health professionals, who could not provide the same level of care as specialists [10].

Additionally, front-line workers experienced psychological ramifications from the lack of palliative specialists needed to support departments and admitted patients [7,9]. Stressful conditions and traumatic experiences in the workplace led to deteriorating mental health among healthcare workers, including post-traumatic distress, depression, and anxiety [7,8]. Integrating palliative care knowledge across all hospital departments and disciplines has taken on a renewed urgency [7,10].

The ethics of palliative care

The COVID-19 pandemic has brought attention to the topic of ethical dying, and what is considered an acceptable death [11]. While the World Health Organization emphasizes the importance of incorporating palliative care in response to global humanitarian crises, reality differs from best practice [12,13]. Due to the pandemic, palliative care looks different than it did before.

Discussions regarding what constitutes an acceptable death, and the ethics of dying are important when preparing and responding to pandemics. A variety of academics in bioethics argue that although maintaining population health is critical during pandemics, oversight of individual-level care and of personal health must be avoided [14]. Specifically, Sheahan and Brennan (2020) argue that although utilitarianism is commonly used to make population health decisions based on cost-benefit analyses, other ethical theories, like “virtue ethics”, must be considered to promote individualized care. If the virtue ethics model is integrated into palliative care, qualities like empathy and trust would then be central considerations for decision-makers and dying patients could be guaranteed an “ethical death” [14]. Due to strains on healthcare systems, the COVID-19 pandemic has exposed how the lack of access to appropriate palliative resources exacerbates grief for patients, families, and professionals [15]. Thus, it is imperative that ethics be considered by health policy makers to maintain quality end-of-life care during pandemics and to mitigate undue harm.

Differential accesses to palliative care

There are several institutions that facilitate and provide palliative care options, including hospitals and community-based hospices [16]. Current approaches to palliative care emphasize quality of life, with practitioners aiming to address physical, psychosocial, familial, spiritual, and prospective dimensions of end-of-life care [17]. At a global scale, individuals residing in low- and middle-income countries, however, are more likely to face barriers that hinder their access to end-of-life care, such as a scarcity of palliative care resources. At national and sub-national levels, individuals from marginalized groups—including those experiencing homelessness, displacement, and adverse mental health outcomes—often face poor access to quality palliative care [18]. Globally, many healthcare systems were ill-equipped to manage rapid influxes of COVID-19 patients requiring end-of-life care, due to the already strained staffing [20]. As a result, many patients experienced solitary deaths or did not receive symptomatic care [18]. Overall, it is evident that some populations were afforded better access to quality palliative care than others, especially those in marginalised groups.

Culturally competent palliative care

During the COVID-19 pandemic, the need for palliative care increased while its delivery and the ethics of dying were seemingly overlooked. Understanding and acknowledging a patient’s wishes in relation to their cultural beliefs and traditions has generally played an important role during the provision of palliative care. However, cultural aspects of care have not been adequately incorporated throughout the pandemic [21]. Safety protocols such as visitation restrictions resulted in isolated end-of-life care, which perpetuated distress for both patients and families, who were unable to perform cultural and traditional rituals associated with death, promoting feelings of anguish [22].

Moreover, studies have indicated that patients from culturally diverse communities, such as New York City, generally face barriers and disproportionate health outcomes in end-of-life care, further exacerbated by the COVID-19 pandemic [23]. This includes challenges such as limited English proficiency and or the lack of cultural mediators between patients and the healthcare system. As such, systemic gaps in healthcare need to be re-examined to improve access to culturally competent palliative care.

Future implications

There is an urgent need to address the gaps and weaknesses in the palliative care system that have been compounded by the COVID-19 pandemic to strengthen the quality and accessibility of our global health systems. As outlined, it is important to address the gaps that limit care delivery, in addition to those that cause undue harm among health professionals, patients, and their families. Globally, differential access to care is evident and the provision of care across the world has often disregarded cultural considerations within palliative care, despite its vitality and necessity. Although efforts have been made within the public health realm to address the physical, biological, and social aspects of illness, end-of-life care has frequently been disregarded [19]. Integrated efforts across public health domains that include specialists, those with lived experience, and culturally diverse voices would be highly beneficial for health systems in addition to patient and family quality of life and satisfaction [24].

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OPINION EDITORIAL

Recovery in the post-pandemic era: A focus on Ontario

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Introduction

The COVID-19 pandemic severely impacted three main sectors in Ontario, the healthcare workforce, long-term care (LTC), and vulnerable groups. This paper seeks to highlight the importance of focusing support and recovery efforts on these sectors in the post-pandemic era. This paper also provides recommendations to address the underlying challenges in these sectors and ultimately improve the health of Ontarians.

Healthcare workforce

Previously, healthcare workers (HWs) have experienced increased levels of burnout, psychological distress, and post-traumatic stress during pandemics [1]. The COVID-19 pandemic had a similar impact on HWs in Ontario [2]. According to Statistics Canada, seven in ten HWs are affected by worsening mental health due to the pandemic [3]. This adversely impacts HWs' performance and, in some cases, causes them to leave their profession altogether. According to a survey conducted in spring of 2020, 30% of nurses and 13% of physicians in Toronto are considering leaving their jobs because of moral distress [4]. This leads to stress on the healthcare system and ultimately impacts the health and well-being of Ontario's population [2].

Recommendations

To enhance the mental health and resilience of HWs in Ontario, interventions at the management level must be implemented. HWs who worked throughout the COVID-19 pandemic express a preferability for safe working conditions and meaningful organizational changes instead of individual counselling or psychological interventions to support mental health [16]. This is critical for reducing mental distress and burnout as well as increasing confidence [17]. Accordingly, organizations should fulfill HWs' basic needs including access to personal protective equipment (PPE) while at work, access to adequate rest and food during shifts, and readily available on-call support to assist with patient load. Moreover, organizations should promote a safe and positive workplace culture by prioritizing staff's mental health. Organizations should implement preventative measures and dedicated support or referral options. For example, proactive monitoring for mental health concerns amongst staff, reduced stigma around mental health, and convenient access to mental health supports.

Long-term care

During the pandemic, LTC facilities were the most frequent outbreak setting wherein more than 80% of Canada's pandemic-related deaths occurred [5]. Ontario had a relatively high proportion of COVID-19 cases and deaths in LTC homes (20% and 64% respectively) compared to other provinces and territories [6]. This sparked a huge concern as it demonstrates the government's failure to safeguard LTC residents. Moreover, it leads to mistrust in the LTC system. A survey found that "85% of all Canadians surveyed - and 96% of Canadians aged 65 years and older - say they will do everything they can to avoid moving into a LTC home" [7]. Ontario is a rapidly aging population with the number of seniors (65+) projected to double to 2.5 million by 2046 [8]. To meet the needs of Ontario's aging population, it is vital to consider the underlying problems and structural shortcomings in LTC delivery.

Recommendations

To address weaknesses in the delivery of LTC in Ontario, the Ministry of Health and Long-Term Care (MOHLTC) must collaborate with staff unions and governing bodies. A key cause for negative outcomes within LTC was insufficient Infection Prevention and Control (IPAC) practice and surveillance in LTC homes. An assessment conducted in 2020 across 76 LTC homes in Ontario found 222 deficiencies in IPAC practices including improper use of PPE, lack of cleaning products, and failure to follow hand hygiene best practices [18].

Noncompliance to IPAC practices is attributed to inadequate IPAC expertise in MOHLTC and LTC homes. The MOHLTC, which is mandated to inspect IPAC in LTC homes, only has three staff with IPAC expertise. Meanwhile, staff in hospitals and public health units have ample expertise in infectious disease outbreaks. However, LTC homes in Ontario missed the opportunity to benefit from this expertise because they are so disconnected from the healthcare system. Comparatively, British Columbia which had strong interconnectedness within their healthcare system had improved COVID-19 outcomes. Thus, the MOHLTC, LTC homes, hospitals, and public health units should work together to increase structured collaboration and partnerships with the aim of enhancing IPAC practices [18].

Furthermore, the Ontario Nurses' Association (ONA) and the Ontario Personal Support Workers Association (OPSWA) should enhance IPAC training for staff. Staff receive minimal and inconsistent IPAC training before working in LTC homes. According to an ONA survey (2020), only 47% of respondents felt that their IPAC training fully met their needs to prevent and control infections as an employee in LTC [18].

Vulnerable groups

The COVID-19 pandemic disproportionately impacted groups with unstable and insecure employment. Racialized groups and women are most commonly unemployed or have precarious employment in retail or service jobs with few protections or benefits [9,10]. Accordingly, these individuals faced increased adverse health impacts from the COVID-19 pandemic. For example, in Toronto and Ottawa, COVID-19 cases were 1.5 to five times higher among racialized communities [11]. Moreover, neighbourhoods in Ontario with the highest ethnic diversity rates were reported to have a four times higher hospitalization rate, four times higher intensive care unit admission rate, and two times higher death rate compared to less diverse neighbourhoods [12].

Also, economic vulnerability and financial insecurity arising from COVID-19 was reported to be highest amongst ethnic minorities including Latin American, South Asian, and Black individuals in Canada [13]. These groups reported difficulty providing financial support to family members, decreased capacity to pay rent or mortgage, difficulty meeting financial obligations (e.g., timely bill payments) and an overall decrease in income throughout the pandemic [13]. The COVID-19 pandemic exposed inequities that caused disproportionate impacts of COVID-19 amongst racialized communities. To ensure that these communities do not fall further behind, inequities must be acknowledged and addressed.

Recommendations

To address inequities faced by vulnerable groups that were disproportionately impacted by COVID-19, financial support and enhanced inclusion efforts should be implemented. For example, the provincial government should work with the Ministry of Finance and the federal government to deliver cash transfers that ensure a living income for workers that are unemployed or in precarious jobs. According to an opinion poll, cash transfers would be acceptable to beneficiaries and the public [19]. In Finland, living income was found to improve well-being and financial security [19]. A pilot project to explore the impact of providing living income was conducted in 2018 in Ontario. The essential cost was determined to be $2000 per month per adult. The federal government can potentially provide the lowest amount needed and provinces and territories can "top up" that amount.

Although this will cost $85 billion annually in 2022, it will reduce poverty rates by 49% [19].

Moreover, racialized and minority communities should be engaged in decision-making regarding post-pandemic recovery to address equity concerns and build community trust. This can be done through civic engagement and engaging multiple stakeholders which will ensure successful participatory decision-making [20].

Conclusion

Recovering from the COVID-19 pandemic will be a challenging process requiring Ontario to establish priorities and plans for multiple sectors. The three key areas of focus for recovery efforts in the post-pandemic era should be, the healthcare workforce, LTC, and vulnerable groups. Most importantly, however, the provincial government should coordinate with healthcare organizations to support the mental health and resilience of the healthcare workforce. The unprecedented pressure faced by HWs throughout the pandemic has increased their risk of poor performance and leaving the profession which is a huge threat to Ontario's healthcare system and subsequently population health outcomes.

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REFLECTIVE NARRATIVE

Burnt out and broke: Inequities in the Post-graduate Application Process During the COVID-19 Era

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INTRODUCTION

It is without question that the post-graduate application process is a significant source of burnout for many students. Nevertheless, as three first-generation, soon-to-be graduating students, we noticed clear discrepancies between ourselves and our peers regarding these experiences. We realized that burnout specifically linked to postgraduate applications during the COVID-19 era presented an opportunity to discuss privilege and access for non-first-generation applicants. The following narrative discusses overlapping themes such as finance, mental health, and opportunistic inequities from the perspective of cross-disciplinary students, having gone through the application process for various graduate and professional programs this past year.

FINANCING THE PROCESS

To start, financial inequities place significant barriers on many students, particularly first-generation students. The postgraduate application process consists of many fees that may not be accessible to all applicants. Standardized tests cost anywhere from $300-$500 per take, with preparation materials ranging from $50 into the thousands. These tests can create barriers in accessing post-graduate education and often dissuade first-generation students from even contemplating these streams. Despite the payoff that may occur once these careers are pursued, the fear of failure and financial ruin ends these dreams before they can begin. Questions such as “is it worth it?” arise. Is it worth it to pursue these tests, applications, and risks if we do not get in? While this fear exists for all students, first-generation students face further cultural challenges and mental blockades exacerbated by financial inequities.

These financial barriers and fears often pressure first-generation students to choose between underpaying internships and the value they may bring, versus working solely to earn necessary finances - despite the lack of “value” this brings to resumes. Many first-generation students are unable to garner financial support from their parents. For those that can, there exists a cultural block. We feel as though we owe it to our parents to pursue opportunities without cost to them. Taking time off work to study is one of the most significant risks we can take, and as first-generation students, we constantly feel like we are thinking ten steps ahead. If we do not get a specific score, will that time off have been worth it, how could we make up those hours? Even though our parents do not explicitly impose these financial pressures, having seen their sacrifices for our success, we feel as though it is our duty and obligation to impact them negatively as little as possible.

The post-graduate process as a first-generation student feels like a never-ending cycle of fear and uncertainty. We were constantly investing time and money with a persistent fear of failure and the pressure of making our parents’ sacrifices worthwhile. These feelings have been persistent in each of our pursuits, and they continue to linger as we approach achieving our dreams and embark on more financial risks, while wondering if the payoff will make it all worthwhile.

OPPORTUNISTIC INEQUITIES

In the postgraduate application process, individuals who come from a place of privilege and who are not first-generation students can access a wider breadth of connections aiding them in their academic and professional pursuits. These connections can lead to guidance for standardized testing preparation, applications, seeking mentorship, and even connections with admission panelists. Many first-generation students lack these connections simply because of recent immigration. This accessibility disparity makes the difference between an application portfolio that is average or below-average versus one that is rich with experience, mentorship, and preparedness. For some people, guidance in the application process can be as simple as phoning a few relatives with direct or indirect experience in a given field. For us, this looked like connecting with people on online forums, reaching out to professionals on LinkedIn and attending application workshops free of charge. Coming from various backgrounds and cultures, we all agreed that this disparity led to debilitating self-doubt and a sense of “not being in the loop.”

It is also essential to address opportunistic inequalities even before the application process begins. With many professional programs being high in competition, shadowing hours become a preferred asset to one’s application file. Alongside shadowing, many programs value research and professional experience relevant to the field of interest. Consequently, the themes discussed above translate equally here. Possessing foundational roots equates with a high chance of opening the door to more valuable opportunities. Throughout our undergraduate career, we witnessed various colleagues gaining portfolio-building experiences simply through a family connection made with a program director. With these inequalities in place, first-generation students must stand out in an academic environment that unfortunately rewards “knowing the right people.”

COVID-19 AND MENTAL HEALTH STRAIN

These inequities seemed to be exacerbated by the onset of COVID-19. As the world slowed down, the pressure to pursue higher education stayed the same, forcing us to work tirelessly while facing an abundance of uncertainty. It seemed that no amount of research or networking could prepare us for these changes, as opposed to the connections engendered through the generational establishments. This was further amplified by the possibility of losing our jobs over the summer, adding to the significant financial strain that accompanies this process for first-generation students.

Our mental energy was quickly drained, and we felt burnt out throughout the application process. It was all that consumed our minds, to the point where it was a topic of everyday conversation, and the fear of failure was prevalent like there was no tomorrow. This worry was deeply rooted in wanting to make our parents proud, not only because of cultural pretense but also because they had made many sacrifices while investing in our future. In a way, we wanted their support to be “worth it.” In addition–thoughts about what family “back home” might think surfaced, making it appear as though this type of success was the only option. This situation severely affected relationships with friends and family, as well as physical health and mental wellbeing. Well aware that other students were experiencing a similar circumstance, it was an isolating experience regardless, further aggravated by the pressures of being a first-generation student.

Furthermore, seeking mental health resources in first-generation communities is often accompanied by stigma and negativity.

Though we were aware that getting help may alleviate these pressures, we were faced with the fear of being perceived as weak by doing so. Our judgment was also clouded by comparing our situation to that of our parents and remembering the conditions in which they started a life in a new country without having access to mental health resources or a strong support network.

Overall, though this process is already draining for many individuals, it was accompanied by a sense of conflicting identities and intense amounts of guilt for many first-generation students. We have more privilege than our parents, yet we face challenges that are unique to our own situations, perhaps in comparison to many of our peers.

CONCLUSION

Throughout this process, it is clear that these inequities are rooted in discrepancies in generational establishment. For first-generation and immigrant students, this leads to the state of “burnt out and broke.” We hope that this narrative resonates with other first-generation students and educational institutions as they work towards addressing these concerns. We strongly believe that efforts can be made to support students who are “set behind” by virtue of their (lacking) establishment while maintaining the integrity of the process as a whole.

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RESEARCH ARTICLE

Surveillance and Detection Applications: Health Information Systems in Japan during the COVID-19 Pandemic

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ABSTRACT

The COVID-19 pandemic presented an immense challenge for Japan's health information systems (HIS). This paper examines national HIS adaptations to meet the increased epidemiological data demands of a pandemic. A literature review was conducted, and literature was collected from PubMed and was restricted to articles that contained the following three search terms: "Japan", "COVID-19", and "Health Information System". Fourteen papers were ultimately selected, including six supplemental resources. Studies revealed Japan's utilization of digital resources accelerated surveillance detection methods and addressed public health concerns, which allowed for the effective monitoring of COVID-19 infection cases. However, the utility of these surveillance and detection methods were limited by low adoption rates by the general population. Recommendations to strengthen Japan's HIS response to a future pandemic include increasing the horizontal scalability of contact tracing mobile applications, as well as improving electronic security.

INTRODUCTION

According to the United Nations Development Programme, health information systems (HIS) perform data collection, processing, reporting, and uses functions to support the delivery of quality and equitable healthcare services [1].

Following the H1N1 pandemic in 2009, Japan modified its national policy for reporting illness, advising that during a pandemic, individuals should first contact a public health professional before visiting a primary care clinic as part of creating a triage system and to accommodate hospital capacity [2]. In line with the modified national policy, at the beginning of the COVID-19 pandemic contact and disease severity information were reported through phone calls, emails, and interviews—a time-consuming and labour-intensive process [3]. Japan employed two strategies to counter this strain: one involved the digitalization of relevant data using mobile applications; and another that utilized a hotline to improve access to relevant information.

This paper presents how Japan's HIS prioritized mobile applications and online services to meet the demands of surveillance and contact tracing during the COVID-19 pandemic. Prioritizing horizontal scalability and electronic security for digital applications are key lessons in the development of public health strategies to detect and monitor future infectious diseases.

METHODOLOGY

Following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) strategy suggested by Moher et al, a literature review was conducted using the following search terms in the PubMed database: "Japan", "COVID-19", "Health Information System," and associated medical subject heading terms [4].

The search was limited to articles written in English and published between 2019 and 2021. Papers were reviewed and considered based on the following exclusion criteria: not specific to COVID-19, Japan, or HIS. Full-text reviews were completed resulting in the inclusion of eight research papers in the final literature review. Supplemental information on HIS from six grey literature was incorporated in this review (Figure 1).

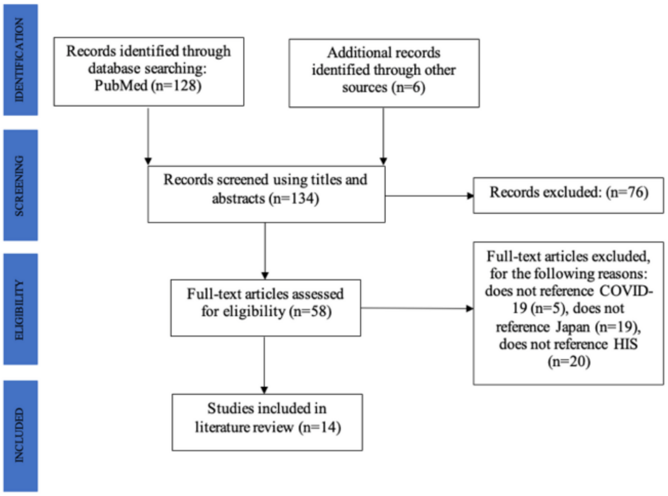

Figure 1. PRISMA Flow Diagram.

DISCUSSION

Digitalization of COVID-19 Data Management

Japan's HIS strategy focused on adapting digital methods to track infection rates in the general population [5]. A primary means of epidemiological mapping identified in the reviewed studies was the use of mobile applications to monitor potential and confirmed COVID-19 cases [6]. An example is an application developed by the LINE corporation, the largest provider of mobile applications and internet services in Japan, called the "COVID-19: Operation for Personalized Empowerment to Render smart prevention And care seeking" (COOPERA) [5]. LINE's launch of COOPERA, in collaboration with the Kanagawa prefectural government, expanded data collection to provide better insights into COVID-19's spread in the country using LINE's existing networks.

Using a chatbot software application, COOPERA gathered participants' relevant information, like their place of residence and symptoms exhibited, offering the prefectures a rapid epidemiological assessment of user data [5]. A significant positive correlation between the data generated by COOPERA and the reported cases of COVID-19 in the nine regions the study examined support the validity of this tool [7].

Contact tracing applications that were publicly available include COVID-19 Contact-Confirming Application (COCOA) and GitHub, which differed from COOPERA in their emphasis on privacy and security. For example, GitHub did not collect personal data but generated transmission graphs using participants' contact points, preserving user anonymity [8]. COCOA is a peer-to-peer phone application for COVID-19 contact tracing that employs Bluetooth technology to instantly capture close contact on various smartphone devices [6]. A study that examined the design and implementation of COCOA found that these detection measures lowered instances of cross-transmission by accelerating detection and proximity measures through Bluetooth technology [6].

K-note is another health-promoting mobile application that predates the COVID-19 pandemic. The application was expanded to allow users to input COVID-specific data and track contacts of infected individuals [9]. Made accessible to the public, K-note quickly amassed over 20,000 users. A 2020 study suggested that K-note's primary benefit was in alleviating the burden on epidemiologists by notifying them of all close contacts of a reported infection, drastically expediting this traditionally labour-intensive process [9]. This study affirmed K-note's role as an effective counter-cluster measure to mitigate the spread of COVID-19.

Use of hotlines to improve access to information

Japan's Ministry of Health, Labour, and Welfare promoted the institution of hotlines with public health nurses as a COVID-19 response to address public concerns and refer infected individuals to the proper healthcare facilities for medical care [2]. A 2021 study analyzed the nature of 1017 calls placed to a special hotline in Tokyo and found that approximately 80% of callers were concerned civilians, while 20% represented larger organizations. A qualitative analysis of these calls identified that a high proportion of concerns were related to COVID-19 symptoms and the availability and location of PCR testing. More than 70% of consultations resulted in a referral to a primary care clinic for in-person care, indicating that there were limitations in the hotline's ability to alleviate the burden on health care professionals but, shows improvements in service coordination and system navigation [2].

RECOMMENDATIONS

This paper's policy recommendations outline several ways in which high-income countries can adapt and improve their HIS in preparation for future infectious disease outbreaks based on lessons learned from Japan.

Increase horizontal scalability of contact tracing

It was found that individuals, managers, and civil servants employed by large companies in the service sector were most likely to download the contact tracing application, COCOA [10]. Horizontally scaling the application to reach a wider audience strengthens monitoring efforts through the continued expansion of pre-existing infrastructure [11]. COCOA could be adapted across various countries, albeit requiring consideration of local privacy concerns and legislation, population technological literacy, and application cost [12]. In 2020, between 70-85% of the population of most high-income countries owned a smartphone, making scaling highly feasible [13].

The scaling process would ensure that the data improves policy and overall health service delivery. By focusing on equity and accessibility when designing tracing applications, epidemiologists will have comprehensive data that more accurately enable decision-makers to improve health policy, services, and systems during a pandemic [1]. Based on contact tracing data, policymakers can better evaluate and implement application mandates within these regions to address data gaps that lead to low case reporting and high rates of infection due to policy gaps. Overall, horizontal scaling would increase the pool of available applications and systems to draw on during future pandemics [1].

Improve electronic security to leverage technology

K-note's tracking system relieved the burdened health care system during the COVID-19 wave by providing timely, complete, quality and readily available personal health records and data [9,14]. However, security concerns about data management and privacy should be resolved for the complete uptake of any eHealth systems. For instance, strict compliance with data privacy measures, and the use of non-cloud-based data storage networks could protect against potential breaches of health data, thereby alleviating public distrust and increasing software uptake [15].

CONCLUSION

Japan's HIS utilized mobile applications and online services to meet epidemiological demands and increased prefectures' capacity to carry out health observations and contact tracing during the COVID-19 pandemic. The application of mobile technology minimized the burden on epidemiologists by improving the monitoring of trends through real-time collection of location and infection data. Greater consideration of horizontal scalability and electronic security, and their integration into public health policy, could enhance Japan's readiness–as well as other high-income countries with similar infrastructure and processes in place–for future infectious disease pandemics.

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OPINION EDITORIAL

Mitigating the Impact of COVID-19 in Canadian Long-Term Care Homes: Recommendations for Improving Healthcare Service Delivery

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INTRODUCTION

Equity and fairness are two central pillars of Canada's publicly funded healthcare system [1]. According to Section 7 of the *Canadian Charter of Rights and Freedoms*, every Canadian is entitled the right to life, which entails the equitable allocation of healthcare resources and services based on individual need [2]. The Canadian Constitution outlines the organization of the healthcare system and places the majority of the responsibilities for healthcare service delivery on provincial and territorial governments. These services are funded by the public and form the basis for the Canadian Government's mandate to achieve universal healthcare coverage for all citizens [1].

According to the World Health Organization, service delivery is one of six interrelated building blocks that make up a health system. Service delivery is the building block that dictates responsibilities for providing effective, safe, and quality personal and non-personal health interventions to those in need when and where they are needed [3]. The service delivery block is facilitated by the leadership and governance structures that assist in developing policy frameworks, leadership, incentives, and system design to ensure the effective delivery of healthcare services [3].

The 2019 Coronavirus Disease (COVID-19) pandemic has exposed disparities that forced governments to re-examine their health systems, especially in vulnerable populations such as residents in long-term care (LTC) facilities. LTC homes provide 'round-the-clock care for older adults who traditionally have complex health conditions that require specialized care [4]. LTC homes deliver services including healthcare to sections of the population that require aid in performing their everyday tasks. In Canada, most residents in LTC homes are advanced in age and have more than one chronic comorbidity [5]. Although LTC homes fall under the purview of provincial and territorial healthcare systems, they exist in a gray area where they may operate as either public or private facilities. Out of the 2,076 LTC homes in Canada, 54% are privately owned and 29% of these privately owned LTC homes operate as private for-profit organizations [6].

Globally, LTC homes were "ground zero" for COVID-19 transmission at the onset of the pandemic; poor preparedness led to Canadians being disproportionately affected when compared to other countries belonging to the Organization for Economic Co-operation and Development (OECD) [7]. Between March 1st 2020, and February 15th 2021, more than 2,500 nursing homes across the country experienced a COVID-19 outbreak, resulting in the deaths of over 14,000 residents [4]. This represents more than two-thirds of Canada's overall COVID-19 deaths during the first wave.

Since then, reported deaths have remained significantly higher than the international average by 41% [4]. Based on these outcomes, this paper discusses shortcomings present in health care service delivery in LTC homes across Canada. Furthermore, this paper presents two viable solutions to improve service delivery in LTC homes during the COVID-19 pandemic and to help prepare for future disease outbreaks.

SERVICE DELIVERY IN LONG-TERM CARE HOMES

Early identification of disease through robust testing and screening ensures that infectious disease threats are caught early and their impact is considerably minimized to only 1-4 cases per facility [7,8]. When the first cases of COVID-19 were recorded in 2020, however, it was clear that Canada was ill-prepared to manage the uncontrollable spread in LTC facilities [8]. In Canada, 94% of deaths in LTC homes in the first wave came from the 194 large outbreaks, each with over 25 cases [8]. The percentage of deaths in Canadian LTC homes was double that of other high income countries in the global north [8].

The LTC home outbreaks took a toll on the entire healthcare system, overwhelming the LTC homes and community at large [4,9]. The delayed implementation of safety protocols resulted in larger and more severe outbreaks. Indeed, provinces that had a slower pandemic response had wider and more frequent outbreaks in LTC homes [8]. Inadequate infection-prevention practices also impacted care workers in LTC homes: various reports have documented the use of garbage bags in place of medical gowns and coffee filters placed underneath masks in the absence of protective N95 masks [10].

In a bid to protect one of Canada's most vulnerable populations, the government implemented five mandates in LTC facilities during the first wave [8]. The first mandate declared a state of emergency and was followed by the second mandate: restricting non-essential visitors from entering LTC facilities. The third mandate required mask-wearing throughout the facilities. However, this was greatly challenged by supply shortages throughout the country [8]. The fourth mandate prohibited LTC staff from working in multiple locations to decrease viral spread, which consequently reduced staffing numbers and left workers with fewer hours. Finally, the fifth mandate expanded testing to LTC staff and residents in order to track the spread of COVID-19 and prevent outbreaks [8].

During the third wave of the COVID-19 pandemic, public health officials added an additional mandate: vaccinations. By March 31st 2021, 95% of residents in LTC homes had their first vaccine dose, resulting in a significant decrease in morbidity and mortality [11]. Ontario, the most populous province, had a COVID-19 mortality rate of 13.5 per 100,000 LTC residents in the first wave, which decreased to 0.4 per 100,000 residents in the third wave [11].

These mandates were an attempt to protect LTC residents; however, they were implemented reactively rather than proactively, which limited the magnitude of their success. Through the strategic implementation of mandates, Canada could ensure the safety of residents in LTC homes and could uphold their commitment to equitable care, prioritizing protection for those who are most vulnerable to disease, especially in the event of future pandemics.

PROPOSED SOLUTIONS

Transitioning to Non-Profit LTC Homes:
Leadership and governance structure influences the quality of service delivery of LTC homes. The lack of accountability and regulation enabled outbreaks to go uncontrolled throughout the country, particularly in for-profit LTC homes [9,12]. The disparity between for-profit and non-profit homes is mediated primarily by staff unionization, chain ownership, and availability of personal protective equipment [9]. For-profit homes often compromise their quality of service in pursuit of maximal profit by paying lower wages, reducing staffing levels, and hiring more part-time workers; this results in more frequent

outbreaks and higher mortality rates compared to non-profit LTC homes [9]. Transitioning away from a for-profit home model towards a system of predominantly non-profit LTC homes will improve current and future disease outbreaks.

A Comprehensive Stakeholder Analysis:

The fourth mandate was intended to reduce COVID-19 spread between homes by restricting staff to one LTC location; however, the number of staff available at each LTC home dropped, contributing to a sector-wide staffing shortage [13]. Through the implementation of a comprehensive stakeholder analysis, all perspectives are examined allowing the intricacies of a complex system to be more easily understood. A stakeholder analysis would have prevented the implementation of a mandate that did not adequately consider the consequences of its enforcement.

CONCLUSION

The COVID-19 pandemic unveiled significant shortcomings in the overall service delivery of Canada's healthcare system. These inadequacies disproportionately impacted vulnerable communities, such as residents in LTC homes, through poor management during the successive waves of COVID-19. By transitioning away from for-profit homes, and introducing a comprehensive stakeholder analysis prior to policy development, there will be significant improvements made to the health care service delivery in LTC homes. This will strengthen the resiliency of LTC homes across Canada and reduce mortality rates in future pandemics.

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Environmental Health

Health-centred perspectives on environmental threats, water and sanitation, and the implications of climate change on human health.

Photo Courtesy of Christina Nguyen

Planetary Health in Punjab

Artwork Courtesy of Navi Goraya

This piece depicts Punjab, India before and after the Green Revolution of the 1960s. The Green Revolution was a transition in Indian agricultural practices from traditional farming methods to the use of high-yielding variety seeds [1]. It was also thus a transition from sustainable farming of genetically diverse crops, to monocultures requiring large amounts of pesticides, fertilizers, and water to maintain [1]. These practices have proven unsustainable over time and the tenets of the Green Revolution were widely debated during the Indian Farmers' Protest (2019-2021) [2]. Soil degradation, groundwater depletion, and pesticide overuse, as well as resulting physical and mental health disorders are major issues facing Punjab's farmers today [2]. This points to the importance of incorporating a planetary heath perspective into global health initiatives and the inextricable link between human health and the health of the Earth itself [3].

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Photo essay: Somalia's Changing Climate

Artwork Courtesy of Aisha Barkhad

The photographs presented in this photo essay were captured by Aisha Barkhad in Borama, Awdal region of Somaliland, Somalia in October of 2020 with the Minolta XG-1 (1979) camera and Kodak Gold 200 Speed 35mm film.

Despite contributing only 0.08% towards global emissions, the Federal Republic of Somalia, an equatorial country located in the Horn of Africa, is ranked among the most climate-vulnerable countries in the world today [1].

Typically, Somalia's climate is influenced by the El Niño Southern Oscillation, which causes flooding and a rise in rainfall in El Niño years, and droughts in La Niña years [2]. The country's climate is also contingent upon the Inter-Tropical Convergence Zone and the fluctuating sea surface temperatures of the Indian Ocean [3]. Having experienced prolonged and recurring droughts, flash floods, erratic periods of rainfall, cyclones, and dust storms for decades, the frequency and magnitude, as well as the social, economic, and health-related ramifications of such capricious environmental shifts have changed over the years in Somalia [4].

After severe droughts in 2007, 2011, 2015, and 2016, delayed rains resulted in another prolonged period of drought in 2019, which was followed by intense rainfall and flooding, displacing more than 370,000 people [5]. Coupled with the COVID-19 pandemic in 2020, Somalia saw locust swarms, prolonged and returning droughts, and deluge. More recently, in 2021, between January and August alone, drought displaced 90,000 people, while floods displaced another 59,000 people [6]. Climate change continued to drive locust movement, presenting Somalia with the largest swarm of locusts in 25 years, resulting in a loss of vegetation and food sources, and jeopardizing the main economic sectors revolving around agriculture and livestock farming, which account for 40% of Somalia's Gross Domestic Product [7].

Further, poor urban planning, inadequate public infrastructure, underinvested healthcare systems, and rising and on-going conflict in Somalia have led to growing inequalities and vulnerabilities that are putting more people at risk of severe climate impacts with fewer resources for resilience, adaptation, and mitigation [8].

In the coming years, climate shocks will exacerbate the already high levels of poverty across the country wherein, today, 69% of Somalis live below the poverty line [9].

With one of the world's highest average annual temperatures, Somalia is growing increasingly warm and climate models are predicting up to a 4.3˚C increase in mean temperature by the end of the century [10]. Simultaneously, precipitation is projected to increase by 3% by 2050, and rainfall is expected to be less regular and more intense, causing flooding and soil erosion [11]. Importantly, rising temperatures and frequency of precipitation will increase the distribution and prevalence of some of the worlds most notorious vector-borne infectious diseases, including malaria. As breeding sites for mosquitoes that transmit malaria and other pathogens become more suitable and expand to reach formerly disease-free regions, vector-borne infectious diseases will afflict new immunologically naïve and vulnerable populations [12].

A degree of culpability may be assigned to climate change for compromising Somalia's fragile governance, services, and peace operations in extraordinary and significant ways. This fragility, which emerged from the amalgam of extreme poverty, deprived health systems, and a changing climate serves to demonstrate a uniquely tragic yet substantial global health challenge that is nowhere better represented than in Somalia.

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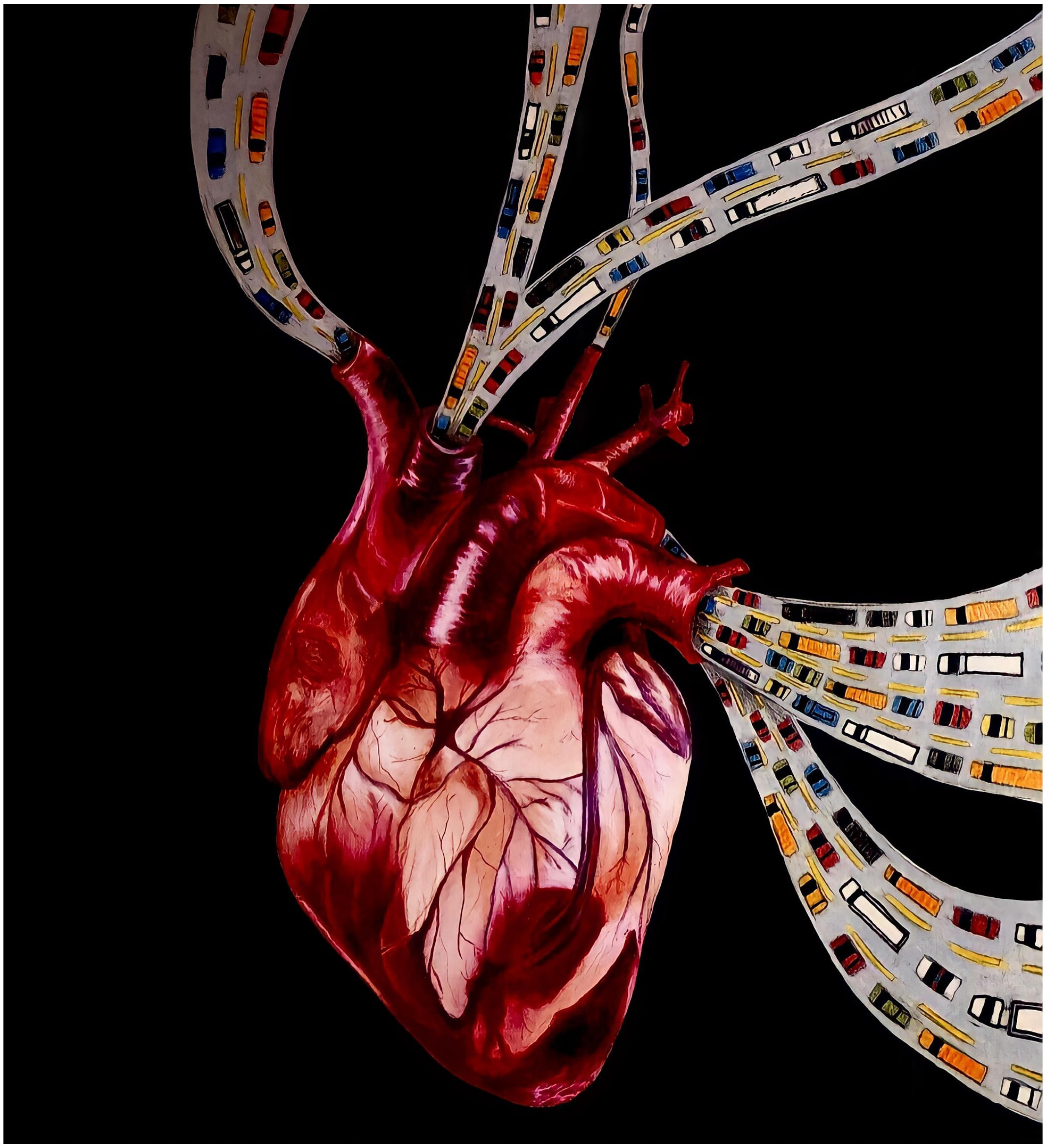
Clogged: The Parallel Between Roads and Arteries: A Visual Depiction

Artwork Courtesy of Manda Novokmet



As traffic continues to increase globally due to factors such as population growth and urbanization, a variety of toxins are emitted that may contribute to clogged arteries associated with ischemic heart disease. When arteries are clogged, there is a reduction in blood and oxygen flow throughout the body with the potential for adverse outcomes and ultimately death. This piece aims to tangibly demonstrate the parallel that can be made between the clogged roads depicted within it and the clogged arteries that such roads directly funnel into. This is a dark, but arguably necessary, rendering of traffic contributing to the clogging of arteries over time in the real world. This blatantly unavoidable correlation that is almost invisible in day-to-day life is made visible through increasing evidence linking traffic-related air pollution to ischemic heart disease as well as through this artistic visualization.

Photo Courtesy of Serena Tejpar

Globalization & Governance

The impact of global knowledge sharing on politics and government.

Photo Courtesy of Samantha Rizzi

OPINION EDITORIAL

US Politics & Public Health: The Case of Venezuela.

Quinn H. Stewart, University of British Columbia

While Venezuela's ongoing public health crisis is commonly attributed to an increasing dependence of the economy on oil followed by the fall of global oil prices worldwide, the effect of political forces is often overlooked [1]. The international community, including the United States (US), has struggled to provide aid to the people of Venezuela while carrying out their foreign policy agenda to depower President Maduro [2]. In this balancing act, the US has continued to prioritize its political agenda through the introduction of sanctions and utilization of aid delivery as a political tool, both of which are working to facilitate the ongoing public health crisis in the country.

Since 2014, the US has imposed over 43 individual sanctions on the Government of Venezuela, President Maduro, and Maduro's political allies (3). While so far ineffective in instigating political change, these sanctions have given President Maduro a scapegoat to blame for the country's problems [3]. Maduro is not entirely unjustified in doing this, as two sanctions have been particularly detrimental in preventing the government's ability to provide healthcare to the people of Venezuela since their introduction: Executive Order (EO) 13808 and Executive Order 13857.

EO 13808, introduced in August 2017, prevents the Venezuelan Government and its constituents, including the Ministry of Popular Power for Health (MPPH) and Petróleos de Venezuela, SA (PdVSA), from accessing the US market [4] The impact of this was a decline in domestic oil production and a subsequent reduction in funding for the MPPH, which relies on PdVSA oil profits to fund over 90% of its budget [5-7].

Additionally, Venezuela relies on the import of essential medicines from the United States, such as insulin [8]. The introduction of EO 13808 did not allow these purchases to be made through the MPPH or government-run programs [9]. While there are broad exemptions to these sanctions that allow for continued humanitarian assistance in the form of food, medicine, and medical devices, EO 13808 has complicated financial transactions from US-based aid organizations to health programs run by the MPPH [10]. The total estimated health impact of E0 13808 alone is estimated to be 40,000 additional deaths per year [11].

EO 13857, introduced in January 2019, prevents the Venezuelan government and its constituents from accessing over $17.6 million in foreign assets, which could be leveraged to stabilize the economy [4,6]. Venezuela is currently experiencing hyperinflation at over 45,000%, and everyday commodities such as baby formula cost approximately $3,000,000 Venezuelan bolívares [2]. This price is equal to more than two monthly minimum wage salaries in the country [2]. Hyperinflation has not been an uncommon occurrence amongst South American countries; however, in all cases, the problem was fixed by the government undergoing fiscal reforms using funding from natural resources and foreign assets [6]. The facilitation of Venezuela's economic crisis by EO 13857 has additionally contributed to the emigration of Venezuela's healthcare workforce. To date, over one-third of registered physicians from public hospitals have left the country due to low wages [10]. If these sanctions have not served their purpose of removing Maduro from power and are facilitating a humanitarian crisis which the US has spent aid money trying to rectify, why are they still in place?

The United States has been direct about their goal to have American-owned oil companies operating in Venezuela [3,6]. However, Maduro has been in strong opposition to US intervention in Venezuelan oil and has denied aid from the US Government and American NGOs in fear that it would be used to further US oil interests and contest his presidency [6,11]. The United States Agency for International Development (USAID) has responded by diverting funding away from UN agencies with well-established aid delivery programs in Venezuela due to concerns that these agencies are in support of the Maduro Government [12]. Instead, USAID has chosen to fund local Venezuelan NGOs with limited ability to address the country's health crisis due to their lack of infrastructural capacity [12]. Additionally, a report by US Foreign Disaster Assistance (OFDA) found that these local NGOs may not comply with the legal requirements needed to accept USAID [12].

In a show of military strength disguised as a humanitarian intervention, USAID entered a deal with President Maduro's opposition, Juan Guaidó, to deliver 368 tonnes of aid into Venezuela through the Colombian border on February 21st, 2019 [12]. With his fear of US aid being used to dismantle his presidency realized, Maduro deployed the Venezuelan security forces to the border [12]. A clash between security forces and USAID workers ensued, leading to the destruction of $34,000 of aid commodities [12]. The utilization of aid in this manner was in direct violation of the US State Department's Foreign Affairs Manual, which states that USAID must follow the humanitarian principles of impartiality and neutrality [12]. In addition, the use of military aircraft to deliver aid was unjustified as commercial flight options were available and were priced at less than half the cost [12]. Further violations were committed as USAID is meant to provide aid based on needs assessments, although included in the 368 tonnes of aid were ready-to-use meals that were deemed unnecessary based on needs assessments conducted by OFDA and Food for Peace [12]. Additionally, due to the expectation that President Maduro's Venezuelan security forces would be irreceptive to aid being delivered in this manner, USAID decided to divert 360 tonnes of aid to Somalia and only attempt to smuggle 8 tonnes into the country [12]. If the US wanted to prioritize the delivery of humanitarian aid, impartial UN agencies of which President Maduro has been historically receptive could have been used as a channel through which to deliver all 368 tonnes of aid to the Venezuelan people.

As is the case with the United States in Venezuela, it may not be possible to pursue both a humanitarian and a political agenda through a common mechanism, as is the case with sanctions and aid delivery. Nevertheless, the global health community must work to depoliticize humanitarian aid provision to uphold the humanitarian principles set out by the UN Human Rights Council of neutrality, independence, and assistance free from any political agenda [8].

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OPINION EDITORIAL

Got Beef? The Role of Traditional Ecological Knowledge and One Health in Managing the True Cost of Meat Consumption

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INTRODUCTION

The rise in consumption patterns within every industry, from food to automobile, is evident through globalization [1]. Under the guise of development, achieving western standards of living are considered as the "progress of the nation". To achieve this quality of life, developing countries attempt to attract foreign investments through extensive economic restructuring and exporting of resources to the developed world. These products are not produced according to the same labour, environmental or safety standards as developed countries, which enables its consumers to enjoy having access to cheap goods without worrying about the ecological cost of consumption [1].

Connecting Meat with Consumption

One of the ways of determining the ecological cost of meat is through evaluating its carbon footprint. Meat products are particularly carbon-intensive, with emissions generated from both on-farm and off-farm sources, including cattle feed production, fermentation of manure and processing of beef products [2]. Intensive livestock production requires large quantities of water and large areas of land for animal grazing. According to global statistical data, approximately 30% of land and 8% of safe drinking water available in the world is invested in livestock production [2]. Transnational food corporations have utilized technology to increase the availability of meat products worldwide, as global citizens have seen sharp declines in meat prices [3]. The sharp decline in costs is not only associated with technological advancements in meat processing, but also from the deflection of true costs onto developing regions.

As demand for meat increases from North America, tropical deforestation in countries such as Brazil occurs to allow for greater grazing land for cattle [4]. In turn, deforestation has significant impacts on the carbon cycle and regulation of the regional climate [5]. When deforestation is combined with poor pasture and manure management, the Greenhouse Gas Emissions (GHG) associated with cattle production are significantly greater per unit of product [4].

The industrialization of agriculture means that every stage of the food production cycle must occur on a large-scale. Similar to most business models, cattle production only accounts for short-term costs within agricultural business plans. Reviewing the example of deforestation, the ecological impacts are widespread and long term. Loss of wildlife habitat and the destruction of indigenous homelands are relatively immediate effects seen within the Amazon [6]. The degradation of pastures decreases cattle-ranching productivity, and in a positive-feedback loop, farmers engage in further deforestation, extensive grazing and land degradation, which further damages the local ecosystem. The long-term effects of these factors have transnational implications, such as ineffective regulation of the water cycle, rising surface temperatures and greater risks of regional flooding.

Ineffective water regulation over time results in reduced soil fertility and land productivity, thereby threatening food security within the region [6].

Although the effects of agricultural intensification are seen globally, the majority of climate change research within the food industry attempts to improve efficiency of production and processing to reduce emissions, while simultaneously increasing yields. The underlying issues of consumption ingrained within every stage of the food cycle largely remain unaddressed. Without tackling consumption, eco-technologies will not make a dent on the commitments that countries have made to UN sustainable development goals, nor will they protect vulnerable workers within our food systems that are already facing climate calamities.

Traditional Ecological Knowledge (TEK) and One-Health

TEK is a rich source of reference when it comes to agricultural production, ecosystem conservation and climate-centered policymaking. In Peru, TEK inclusion in agroecological systems has been useful for water management across several farming communities [7]. For example, TEK has been used to implement and manage man-made wetlands, known as bofedales, which can produce high-quality, low-carbon animal fodder to feed the livestock, even during dry seasons [7]. Communal efforts to maintain healthy and biodiverse wetland systems ensures the health of animals while improving the energy efficiency of livestock production. This example highlights one way through which TEK increases livestock producers' climate resilience to dry spells through efficient natural resource management [7].

Pastoralists that account for TEK when making herding decisions are shown to engage in sustainable land-planning and are less likely to over-extract natural resources [8]. In West Africa, TEK on livestock focuses on the use of natural land cover for grazing compared to cropland. The pastoralists in this region have a detailed soil classification system through which they determine appropriate grazing landscapes for their livestock for different climate conditions. This maintains the fertility of soil to produce enough forage for animals without grassland degradation [8]. TEK on livestock provides holistic solutions by accounting for all relationships the livestock have with the surrounding ecosystem, including soil quality, water quality and vegetation biodiversity [8]. In more industrialized production facilities, only the relationship between livestock and their forage is accounted for.

The interconnected nature of human, animal and ecological health are described by the concept of one-health. When policymakers consider and account for the intricate relationships between these variables, the impact of programming grows. The above applications of TEK show the practical socioeconomic, and in-turn health benefits of this transformative approach. Rising consumption of meat products is directly correlated to the rise in zoonotic disease, while biodiversity loss increases the prevalence of epidemics [9]. Reducing the complexity of food production chains, promoting community self-sufficiency, reducing the distance between animal farms and end-consumers, and most importantly, reducing meat consumption through stronger regulations, all apply the one-health lens to animal farming. This should have both direct and indirect positive effects on human health by reducing the risks of infectious disease and agro-pollution, while promoting food and water security, and natural resource conservation [9].

CONCLUSION

The individualization of responsibility in climate action is a common practice in modern-day environmentalism. The ability to make individual decisions and the freedom to have a variety of choices is celebrated, regardless of the possibilities of cost displacement, overconsumption and often, wasteful consumption [10]. People who care (or can afford to care) about what conditions their food is produced under, can purchase products that are certified through climate labelling. Although rising demand for meat is linked to being a key driver for pandemics, consumption is largely overlooked or challenged in policy recommendations that assume this is a fixed certainty [9]. Instead, "eco-solutions" for intensive livestock production focus on increasing production efficiency through technologies and promoting eco-markets in which consumers can choose as the 'markets decide'. The impact of green technologies at production facilities has shown to further stimulate unsustainable consumption as producers ultimately reinvest the savings from efficient resource-use into even greater production, land clearance and further exploitation of resources. However, these solutions are marketed as victories that should be celebrated as wins against climate change. Governance approaches therefore need to move past market-mechanisms and soft regulations within the food industry.

The sharp declines in the cost of meat combined with policies that fail to confront the relationship producers have with the surrounding ecosystem shows the limits of the green economy and eco-capitalism to bring forth large-scale change. This is evident within the meat industry, which has seen exponential growth within consumption, despite technological advancements in meat production and processing. The paradox of 'sustainable consumption' remains a challenge in modern-day environmental movements, which refuse to move past the question 'how can we maintain the status-quo without sacrificing much else?'.

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Health Equity

A look at discourse and strategies to improve equitable access to healthcare of vulnerable populations.

Photo Courtesy of Kelly-Anne Dela Cueva

RESEARCH ARTICLE

The Perspectives And Experiences Of Indigenous Women With Gestational Diabetes Mellitus: A Systematic Review And Meta-Synthesis Of Qualitative Research

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ABSTRACT

Indigenous women are at higher risk for developing gestational diabetes mellitus (GDM); however, there are no systematic reviews that primarily study the perspectives and experiences of Indigenous women with GDM (without comorbid disorders). Therefore, the aim of this study is to understand the barriers and facilitators to positive health outcomes among Indigenous women with GDM. To further analyze this issue, a systematic review and meta-synthesis was conducted using OVID (Medline) and CINAHL databases. Searches were limited to four countries: Australia, Canada, New Zealand, and United States. Six key themes were identified, including 3 barriers and 3 facilitators to positive health outcomes. Based on the results of this study, recommendations to address this inequity include incorporating positive communication, reciprocal exchange, family, community, and culturally relevant education into GDM treatment.

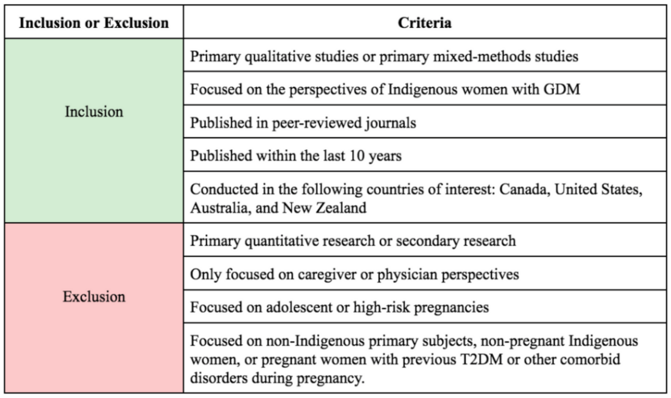
INTRODUCTION

As of December 17, 2020, South Africa (SA) had GDM is glucose intolerance with first onset or diagnosis during pregnancy [1]. GDM prevalence is higher in certain ethnic groups, including Indigenous women [2-4]. The term Indigenous describes populations with distinct languages and cultures that pre-date colonial societies [5]. Among Indigenous populations, prior research has studied the etiology of GDM [6-8] and the experiences of women with GDM [9-12]. Nevertheless, a systematic review of the perspectives and experiences in these papers has not been published. Therefore, the purpose of this paper is to answer the research question: What perspectives do Indigenous women with GDM have on the barriers and facilitators to positive health outcomes? Positive health outcomes are defined as functioning well on a physical, mental, and social level [13].

METHODOLOGY

This systematic review and qualitative meta-synthesis explored the perspectives of 96 Indigenous women from 7 studies. The study population was established through database searches using OVID (Medline) and CINAHL, revealing 4261 articles to be reviewed. All abstracts and full-texts were screened independently and in duplicate by 5 authors. Articles were included if they were conducted in Australia, Canada, New Zealand, or the United States. For a comprehensive list of inclusion and exclusion criteria, see Table 1.

Table 1. Inclusion and Exclusion Criteria



Inclusion or Exclusion	Criteria
Inclusion	Primary qualitative studies or primary mixed-methods studies
	Focused on the perspectives of Indigenous women with GDM
	Published in peer-reviewed journals
	Published within the last 10 years
	Conducted in the following countries of interest: Canada, United States, Australia, and New Zealand
Exclusion	Primary quantitative research or secondary research
	Only focused on caregiver or physician perspectives
	Focused on adolescent or high-risk pregnancies
	Focused on non-Indigenous primary subjects, non-pregnant Indigenous women, or pregnant women with previous T2DM or other comorbid disorders during pregnancy.

Searches were limited to studies published between January 1, 2010 and January 2, 2020 due to the high volume of literature found, and searches were completed in January 2020. For a full list of search terms, see Appendix 1.

Each full-text article was analyzed in duplicate, where each author independently extracted textual evidence. Guided by grounded theory (14), a coding process was employed to break down this evidence into key themes. The authors co-developed a final list of themes that emphasized the significance of findings across a larger number of studies using inductive [15] and constant comparison approaches [16]. The primary findings of the articles were analyzed without re-interpretation.

RESULTS

Figure 1. PRISMA Diagram

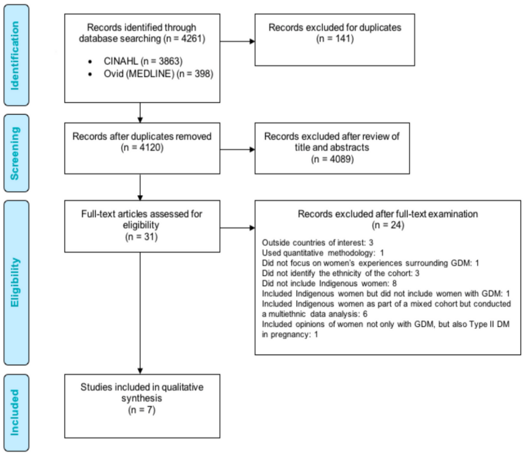
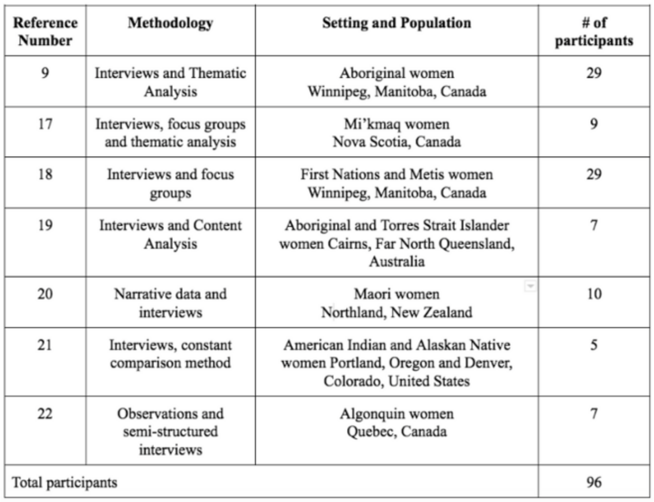


Table 2. Demographic data of studies



Reference Number	Methodology	Setting and Population	# of participants
9	Interviews and Thematic Analysis	Aboriginal women Winnipeg, Manitoba, Canada	29
17	Interviews, focus groups and thematic analysis	Mi'kmaq women Nova Scotia, Canada	9
18	Interviews and focus groups	First Nations and Metis women Winnipeg, Manitoba, Canada	29
19	Interviews and Content Analysis	Aboriginal and Torres Strait Islander women Cairns, Far North Queensland, Australia	7
20	Narrative data and interviews	Maori women Northland, New Zealand	10
21	Interviews, constant comparison method	American Indian and Alaskan Native women Portland, Oregon and Denver, Colorado, United States	5
22	Observations and semi-structured interviews	Algonquin women Quebec, Canada	7
Total participants			96

The analysis revealed 6 key themes, including 1) Feelings of Stress and Fear; 2) Financial, Transportation, Screening/Prevention Barriers; 3) Inadequate Patient Education, and 3 facilitators: 1) Positive Communication and Reciprocal Exchange; 2) Family and Community Ties; 3) Culturally Relevant Education.

Barriers to Positive Health Outcomes

i) Feelings of Stress and Fear

The women in this study reported experiencing psychological barriers, such as feelings of stress and fear, at each stage of the healthcare process from diagnosis, to treatment, and postpartum care [9, 17]. When awaiting the results of diagnostic tests, the women felt overwhelmed because they were unaware of what was happening to their bodies, and after receiving the GDM diagnosis, many felt scared because they did not know the long-term effects of GDM [17]. Additionally, GDM management, often involving insulin and diet changes, exacerbated their negative emotions [9,17]. Some women reported that they felt like they were on "emotional roller coasters" due to physiological changes caused by insulin [17] and dieting created unhealthy relationships with food [9]. Also, prolonged feelings of stress contributed to postpartum depression in some women [9,17].

ii) Financial, Transportation, and Screening/ Prevention Barriers

Most participants relied on welfare that did not provide sufficient income to purchase nutritious foods [17]. Additionally, transportation barriers prevented women from accessing GDM management services [17-19]. Furthermore, although Indigenous women have a higher risk for developing GDM, there is a lack of vigilant GDM screening and prevention for this population [20]. Undiagnosed GDM adversely affects the long-term health outcomes of women, which can lead to complications, such as premature births [20].

iii) Inadequate Patient Education

Most women may not have knowledge of what GDM is prior to their diagnosis. This can create barriers for them to access preventable measures to decrease their risk of developing GDM [21]. This lack of knowledge is primarily due to inadequate patient education because healthcare providers sometimes provide unclear diagnoses [18-19]. For instance, several women recall that their healthcare providers never explained what GDM was [17,19]. At times, healthcare providers educated their patients, however, women found that their providers' communication was confusing or complex [9,17-19]. Women reported that their providers struggled to communicate the long-term risks of GDM [17]. provided unclear educational resources [18,20] and did not clearly explain test results [20].

Facilitators to Positive Health Outcomes

i) Positive Communication and Reciprocal Exchange

Positive communication which encompasses sincerity [17-18], understanding [17], and respect [17-18], is integral to cultivating trust between patients and their healthcare providers [17-18,20]. When healthcare providers took initiative to interact with their patients, the women in the studies reported the experience of stronger bonds with their care providers and thus, were more likely to engage in healthy behaviours [20]. Moreover, reciprocal exchange facilitates trust. This occurs when healthcare providers actively listen to the perspectives of their patients and respect that they are in control of their own bodies [18]. This ultimately encourages patients to express their opinions and concerns about their health [18].

ii) Family and Community Ties

Many Indigenous women in the studies described that family support was crucial to successful GDM management [22]. Family members encouraged healthy eating and physical activity, which directly affected the likelihood of successful GDM management and positive health outcomes [21-22]. Families with vegetable gardens were more likely to have a balanced diet [17], and women were more likely to go on walks when they could do so with family members [22] Community support also helped the women manage GDM [17,21-22]. The women more frequently implemented health advice if it came from trusted community members [17]. Members of the community, including community nurses and health centers, prioritized building trust with the women by providing culturally relevant care. They upheld traditional Indigenous knowledge by facilitating cooking classes, where women learned about Indigenous cooking practices [17].

iii) Culturally Relevant Education

Effective patient education is culturally tailored to the women's needs [21]. Culturally relevant education is important because Indigenous women do not always identify with Western medicine, which is centered on a biomedical approach [21]. Therefore, successful GDM treatment should incorporate Indigenous practices into educational resources [21]. To accomplish this goal, some women suggested implementing forest diabetes camps, where healthcare providers could discuss GDM while performing activities like snowshoeing [22]. Since being in the forest is important in many

Indigenous traditions, forest diabetes camps are culturally relevant [22].

DISCUSSION

This review demonstrates how poor patient-doctor interactions deter Indigenous women from accessing healthcare [17-19]. Similarly, a 2016 review documented how the impact of colonization on patient-provider relationships negatively impacted Indigenous women's maternal health experiences [23]. Additional studies have reported how a lack of cultural competency contributes to negative patient-provider interactions [24-25]. This review also examines how family and community ties, positive communication, and culturally relevant care help Indigenous women with GDM achieve positive health outcomes [17-18, 20-22]. A 2015 review of healthcare services for Indigenous wellbeing documented similar facilitators [26].

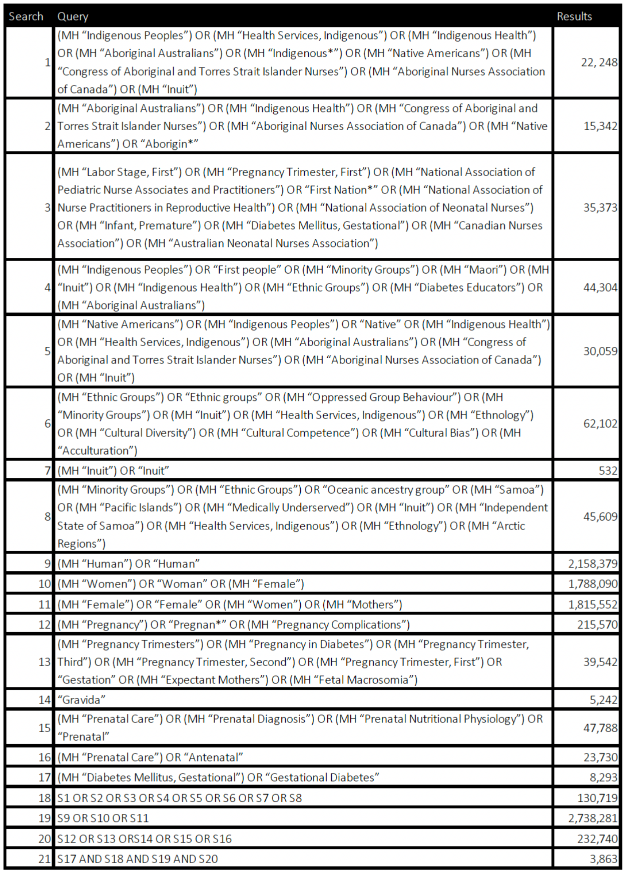
Limitations include the lack of inclusion of grey literature, and the inability to consult with Indigenous researchers regarding the search strategy and data analysis. Nonetheless, most of the included studies strictly adhered to the Ownership, Control, Access and Possession (OCAP) Principles for Indigenous Research, reinforcing the credibility of this review. The authors relied solely on the interpretations of the included studies, which prioritized patient perspectives and Indigenous worldviews. The studies included in this review also surveyed Indigenous women from various countries, thereby encompassing perspectives from geographically and culturally diverse regions.

CONCLUSION

This systematic review presents the perspectives of Indigenous women with GDM, revealing barriers and facilitators within the healthcare system and community. Creating a system rooted in positive communication, reciprocal exchange, and culturally relevant education which also incorporates family and community into GDM management must be a priority to ensure better health outcomes for Indigenous women on a global scale.

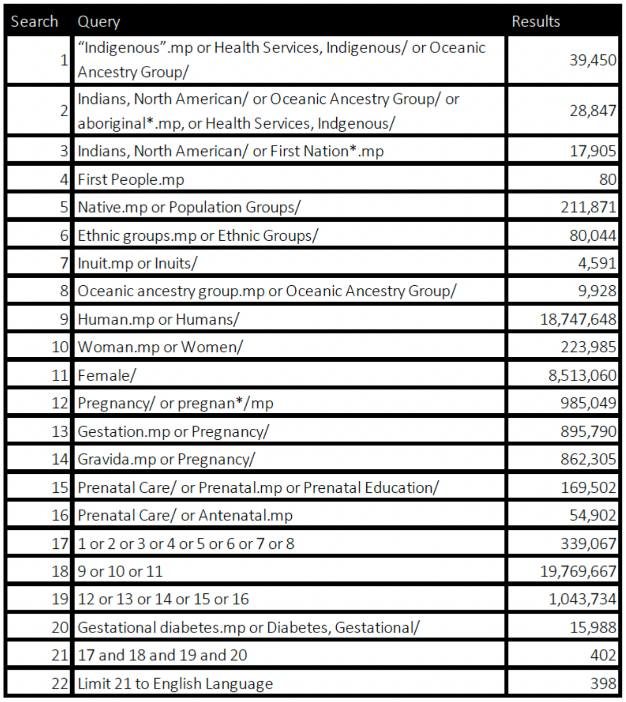
APPENDIX 1

Search Strategy executed in CINAHL



Search	Query	Results
1	(MH "Indigenous Peoples") OR (MH "Health Services, Indigenous") OR (MH "Indigenous Health") OR (MH "Aboriginal Australians") OR (MH "Indigenous*") OR (MH "Native Americans") OR (MH "Congress of Aboriginal and Torres Strait Islander Nurses") OR (MH "Aboriginal Nurses Association of Canada") OR (MH "Inuit")	22, 248
2	(MH "Aboriginal Australians") OR (MH "Indigenous Health") OR (MH "Congress of Aboriginal and Torres Strait Islander Nurses") OR (MH "Aboriginal Nurses Association of Canada") OR (MH "Native Americans") OR "Aborigin*"	15,342
3	(MH "Labor Stage, First") OR (MH "Pregnancy Trimester, First") OR (MH "National Association of Pediatric Nurse Associates and Practitioners") OR "First Nation*" OR (MH "National Association of Nurse Practitioners in Reproductive Health") OR (MH "National Association of Neonatal Nurses") OR (MH "Infant, Premature") OR (MH "Diabetes Mellitus, Gestational") OR (MH "Canadian Nurses Association") OR (MH "Australian Neonatal Nurses Association")	35,373
4	(MH "Indigenous Peoples") OR "First people" OR (MH "Minority Groups") OR (MH "Maori") OR (MH "Inuit") OR (MH "Indigenous Health") OR (MH "Ethnic Groups") OR (MH "Diabetes Educators") OR (MH "Aboriginal Australians")	44,304
5	(MH "Native Americans") OR (MH "Indigenous Peoples") OR "Native" OR (MH "Indigenous Health") OR (MH "Health Services, Indigenous") OR (MH "Aboriginal Australians") OR (MH "Congress of Aboriginal and Torres Strait Islander Nurses") OR (MH "Aboriginal Nurses Association of Canada") OR (MH "Inuit")	30,059
6	(MH "Ethnic Groups") OR "Ethnic groups" OR (MH "Oppressed Group Behaviour") OR (MH "Minority Groups") OR (MH "Inuit") OR (MH "Health Services, Indigenous") OR (MH "Ethnology") OR (MH "Cultural Diversity") OR (MH "Cultural Competence") OR (MH "Cultural Bias") OR (MH "Acculturation")	62,102
7	(MH "Inuit") OR "Inuit"	532
8	(MH "Minority Groups") OR (MH "Ethnic Groups") OR "Oceanic ancestry group" OR (MH "Samoa") OR (MH "Pacific Islands") OR (MH "Medically Underserved") OR (MH "Inuit") OR (MH "Independent State of Samoa") OR (MH "Health Services, Indigenous") OR (MH "Ethnology") OR (MH "Arctic Regions")	45,609
9	(MH "Human") OR "Human"	2,158,379
10	(MH "Women") OR "Woman" OR (MH "Female")	1,788,090
11	(MH "Female") OR "Female" OR (MH "Women") OR (MH "Mothers")	1,815,552
12	(MH "Pregnancy") OR "Pregnan*" OR (MH "Pregnancy Complications")	215,570
13	(MH "Pregnancy Trimesters") OR (MH "Pregnancy in Diabetes") OR (MH "Pregnancy Trimester, Third") OR (MH "Pregnancy Trimester, Second") OR (MH "Pregnancy Trimester, First") OR "Gestation" OR (MH "Expectant Mothers") OR (MH "Fetal Macrosomia")	39,542
14	"Gravida"	5,242
15	(MH "Prenatal Care") OR (MH "Prenatal Diagnosis") OR (MH "Prenatal Nutritional Physiology") OR "Prenatal"	47,788
16	(MH "Prenatal Care") OR "Antenatal"	23,730
17	(MH "Diabetes Mellitus, Gestational") OR "Gestational Diabetes"	8,293
18	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8	130,719
19	S9 OR S10 OR S11	2,738,281
20	S12 OR S13 ORS14 OR S15 OR S16	232,740
21	S17 AND S18 AND S19 AND S20	3,863

Search Strategy executed in OVID MEDLINE



Search	Query	Results
1	"Indigenous".mp or Health Services, Indigenous/ or Oceanic Ancestry Group/	39,450
2	Indians, North American/ or Oceanic Ancestry Group/ or aboriginal*.mp, or Health Services, Indgenous/	28,847
3	Indians, North American/ or First Nation*.mp	17,905
4	First People.mp	80
5	Native.mp or Population Groups/	211,871
6	Ethnic groups.mp or Ethnic Groups/	80,044
7	Inuit.mp or Inuits/	4,591
8	Oceanic ancestry group.mp or Oceanic Ancestry Group/	9,928
9	Human.mp or Humans/	18,747,648
10	Woman.mp or Women/	223,985
11	Female/	8,513,060
12	Pregnancy/ or pregnan*/mp	985,049
13	Gestation.mp or Pregnancy/	895,790
14	Gravida.mp or Pregnancy/	862,305
15	Prenatal Care/ or Prenatal.mp or Prenatal Education/	169,502
16	Prenatal Care/ or Antenatal.mp	54,902
17	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8	339,067
18	9 or 10 or 11	19,769,667
19	12 or 13 or 14 or 15 or 16	1,043,734
20	Gestational diabetes.mp or Diabetes, Gestational/	15,988
21	17 and 18 and 19 and 20	402
22	Limit 21 to English Language	398

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The Breast Cancer Burden in Sri Lanka: An Acrylic Painting

Artwork Courtesy of Sophia Guinness

Breast cancer is a dominant diagnosis among women globally. While the incidence of breast cancer has been decreasing over the last few decades in developed nations, however the opposite is true for developing countries such as Sri Lanka (2). The burden of breast cancer in Sri Lanka is uncomfortably high, with about 3,000 new cases diagnosed each year (1). This increase is especially prevalent among post-menopausal women (2). This painting serves to illustrate the story and spread awareness of the breast cancer burden in Sri Lanka. One can note the central Sri Lankan woman, with some grey hair pointing towards the older demographic that breast cancer typically affects. She is surrounded by the breast cancer awareness ribbon, and the colour streaks found in the Sri Lanka national flag. This painting advocates for further research and interventions needed to be done to combat the rising cases of Breast Cancer in Sri Lanka.

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RESEARCH ARTICLE

Strategies For Improving Access To Cancer Screening Services For Indigenous Women In Canada: A Scoping Review

Bhajan Gill, Western University; **Maren Kimura,** Western University; **Nikita Singh,** Western University; **Esohe Ogbomo,** Western University; **Chantal Gillett,** Western University; **Zihuang Zhang,** Western University; **Yue Jia,** Western University.

ABSTRACT

High cancer rates among Indigenous women are associated with barriers to accessing cancer screening programs. The purpose of this scoping review is to uncover the social, political, and economic barriers that negatively impact Indigenous women's access to cancer screening services. Peer-reviewed literature was screened, yielding 21 studies that met the inclusion criteria. The studies found that many structural barriers affecting Indigenous women are primarily rooted in pre-existing sociohistorical conditions established through colonization and forced cultural assimilation. Barriers include mistrust in the healthcare system, limited access to healthcare services and information, and other healthcare inequities. Health literacy and cultural competency were identified as having the most significant impact on addressing health disparities related to cancer screening uptake. Moving forward, health systems must build upon the existing strengths of Indigenous communities to improve health literacy and incorporate cultural competence into care delivery.

INTRODUCTION

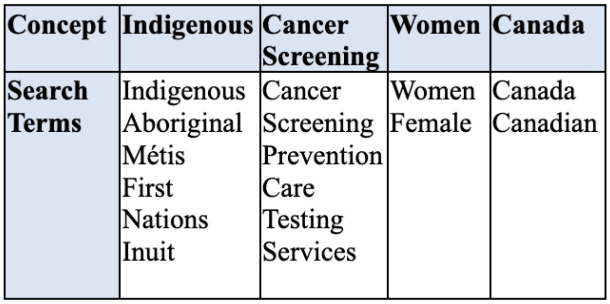
In Canada, Indigenous women experience disproportionate barriers to accessing cancer screening services, resulting in higher incidence and mortality rates from common cancers (e.g., breast and cervical cancers) compared to non-Indigenous individuals [1-3]. Despite significant breakthroughs in cancer research, screening, and treatment, these advancements are not accessible to all populations, and disparities persist [1,4]. These disparities stem from intersecting factors related to historical and ongoing colonial policies such as residential schools, lack of on-reserve screening services, and limited trained healthcare professionals, resources, and funding [1]. Additional barriers include complex healthcare navigation, historical trauma, and limited culturally safe and accessible care [5,6].

Indigenous women are more likely to be diagnosed with late-stage cancer than non-Indigenous women [1]. Through effective cancer screening programs, early detection can target cases at their most treatable stages and is among the most effective ways to reduce cancer-related morbidity [1]. A multi-faceted approach is needed to address these historical and structural injustices and understand the breadth of this issue. This scoping review was conducted to identify the social, political, and economic barriers that impact cancer screening accessibility among Indigenous women in Canada.

METHODOLOGY

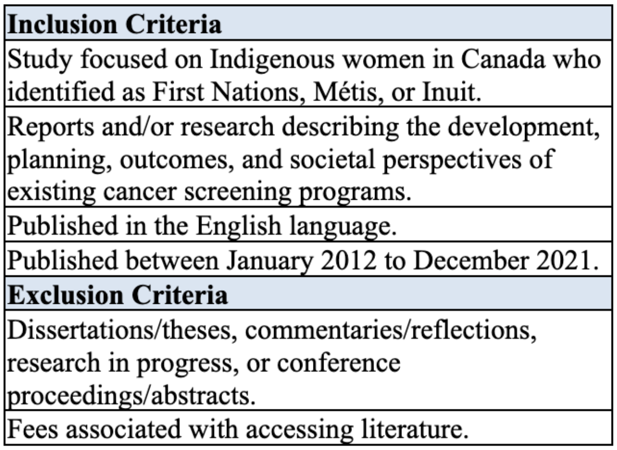
Two electronic databases, PubMed and Medline (OVID), were screened for peer-reviewed articles using key search terms (Table 1). Reviewers applied the eligibility criteria to a 10-year period to capture the most recent and applicable sources for inclusion (Table 2). The search strategy was not limited by study design, and "cancer screening" was kept broad due to limited literature investigating cancer screening related to Indigenous female health. Additionally, broad search terms were used to include several Indigenous groups across Canada.

Table 1: Key Search Terms



Concept	Indigenous	Cancer Screening	Women	Canada
Search Terms	Indigenous Aboriginal Métis First Nations Inuit	Cancer Screening Prevention Care Testing Services	Women Female	Canada Canadian

Table 2: Inclusion and Exclusion Criteria



Inclusion Criteria
Study focused on Indigenous women in Canada who identified as First Nations, Métis, or Inuit.
Reports and/or research describing the development, planning, outcomes, and societal perspectives of existing cancer screening programs.
Published in the English language.
Published between January 2012 to December 2021.
Exclusion Criteria
Dissertations/theses, commentaries/reflections, research in progress, or conference proceedings/abstracts.
Fees associated with accessing literature.

RESULTS

The search strategy yielded 145 peer-reviewed articles. After screening, 21 studies met the inclusion criteria, and 124 studies were excluded (Figure 1). Included studies were conducted across Canada and reflected data from various Indigenous groups. Studies used a variety of qualitative, quantitative, and mixed methodologies, and some included international groups for comparison [7]. Additionally, three reviews were included [1,6,7]. A variety of female health screening services were examined, with fourteen studies focusing on cervical cancer [2,3,7-18], one study focusing on breast cancer [4], and six studies focusing on multiple types of female cancer screening [1,5,6,19-21]. Studies also investigated program implementation to examine community uptake of screening services [5,10,12,13,18]. Furthermore, several studies explored strategies for tackling barriers affecting Indigenous women's ability to access cancer screening services [1,2,6,10,13,17].

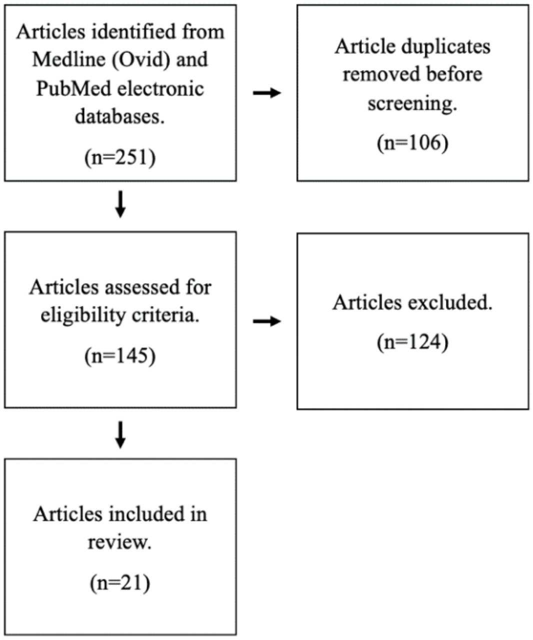


Figure 1: Source selection process

DISCUSSION

Multiple studies revealed that Indigenous women experience significantly more health inequities compared to the general population, especially related to cancer screening [9,13,19,20]. This review uncovered several barriers faced by Indigenous women accessing cancer screening services and highlighted improving health literacy and cultural competency in cancer care as impactful strategies to reduce inequities.

Barriers to Care

This review indicated that Indigenous women face several social, economic, and political barriers to accessing cancer screening services in Canada. Many structural barriers affecting Indigenous women are rooted in pre-existing sociohistorical conditions and government policies established through colonization and forced cultural assimilation of Indigenous Peoples [2]. For example, mandatory relocation to residential schools for Indigenous children contributed to power imbalances that hindered Indigenous women's abilities to access proper healthcare services [13]. Moreover, policies that created jurisdictional divisions between on- and off-reserve Indigenous communities further reduced access to healthcare information [13,11]. These factors have contributed to women's experiences of discrimination and feelings of mistrust towards the healthcare system, deterring cancer screening service utilization and exacerbating healthcare disparities [5,13]. Alongside intergenerational trauma associated with colonization, studies identified other structural barriers faced by Indigenous women, including lack of culturally competent healthcare providers and services, poor health literacy, socioeconomic inequalities, geographical barriers, constraints on resources, and a lack of recall-based screening systems [14,8,5].

Areas of Impact

Health Literacy

Multiple studies highlighted low health literacy as a prominent barrier to accessing cancer screening services for Indigenous women. Tratt et al. indicated that the greatest barrier Indigenous women face towards obtaining screening services was an insufficient understanding of health information [15]. Low health literacy included issues of language barriers, inadequate communication, disparities in accessing technology, and stigmas and sensitivities surrounding sexual health promotion and treatment [7]. Improving health literacy requires a greater focus on education and disseminating screening information to support health system navigation for Indigenous women [5]. Several studies emphasized that providing education through storytelling and visual communication (e.g., pictures) indicated higher levels of screening service engagement [5,10]. Additionally, hosting activities such as community-tailored screening events has been shown to improve attitudes towards cancer screening [13,12].

Cultural Competency

Another area of impact was increasing access to culturally competent care for Indigenous women, whereby awareness campaigns and screening initiatives were common methods of providing effective and accessible messaging [13]. Screening initiatives that account for cultural preferences can empower Indigenous women to take initiative over their health care and increase their trust in healthcare systems [16]. Furthermore, multiple studies highlighted the need for educational programs for healthcare professionals to increase understanding of culturally competent care and structural barriers faced by Indigenous women [8,16,17]. Moreover, these programs are more effective when led or developed in partnership with Indigenous communities [1,17].

Historical factors associated with cultural genocide and experiences of abuse or violence should also be acknowledged, as they can lead to reluctance in accessing cancer services [14]. Evidence indicates screening rates improve when policies and services promote and respect the experiences and values of Indigenous women [11,17]. Additionally, patient-provider trust is a necessary element for fostering patient acceptance of screening processes that may be potentially unfamiliar or invasive (e.g., Pap tests) [5,11,16]. A key component of trusting relationships is effective communication. Tratt et al. indicated that effective healthcare provider communication, specifically visual communication, acknowledged cultural competencies were highly influential towards Inuit women accessing cancer screening services [15]. Other strategies for promoting effective communication included using traditional storytelling methods, hosting face-to-face workshops, and collaborating with a community liaison to address language and cultural barriers [5,10].

Limitations

This scoping review has several limitations. First, many studies had small sample sizes (n $\leq$ 11 communities) with participants often from similar cultural groups [2,8,10-18]. This is likely because underscreening remains a prevalent issue within Indigenous communities due to structural barriers and healthcare system mistrust [2,4]. Second, stakeholder groups (e.g., Elders, healthcare professionals) were often unevenly represented, and while conversations were predominantly with women, the voices of young women were often absent [2,4,14]. It is important to understand that one study's results cannot be generalized to encompass all Indigenous women's experiences. Furthermore, studies neglected to educate both males and females about cancer screening services. Third, some studies have highlighted the risk of misclassification, potentially skewing population-based cancer screening registries [4,7]. Misclassification among Indigenous populations can occur due to inaccurate identifications for areas of Residence, healthcare information, ethnicity, and status [1]. Finally, many study methodologies were subject to self-report bias [3,4,8,9,17,19,20].

CONCLUSION

This review has exposed core social, political, and economic barriers that can reduce Indigenous women's access to cancer screening services and perpetuate health inequities. Moving forward, health systems must build upon the existing strengths of Indigenous communities to improve health literacy and incorporate cultural competence into care delivery. Future policies, programs, and research must aim to reduce the overall burden of cancer within Indigenous communities and strive toward eliminating structural barriers. To address the limitations of current cancer screening initiatives, collaborative efforts must be made to challenge systemic biases within our healthcare system and incorporate diverse perspectives of Indigenous communities into future program implementation.

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RESEARCH ARTICLE

Achieving Universal Healthcare Coverage in Ethiopia Through a Healthcare Financing Lens

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ABSTRACT

Since the mid-1970s, Ethiopia has been working towards achieving universal health coverage (UHC) to provide access to high-quality and necessary medical services to its citizens without incurring huge financial burdens on their households. However, questions concerning how financially feasible implementing UHC would be if poverty and health disparities persist throughout the country. This paper focuses on the need for health systems thinking, specifically centering on healthcare financing to improve Ethiopia's delivery of equitable health care services. A systematic review was carried out in which literature revealed that more financing is necessary to achieve UHC in the country.

Additionally, adopting a UHC financing model will address the current inequitable distribution of public spending on health which has the potential to increase the resilience of the healthcare system while improving access to health care and essential medicines. Currently, multiple factors contribute to Ethiopia's low UHC, further exacerbating health inequities already caused by poverty and infectious disease. Therefore, investment in health service financing must be scaled-up for UHC to be achieved. UHC financing will allow for transparent, equitable, and efficient allocation of healthcare resources.

INTRODUCTION

As the second-largest country in Africa, Ethiopia has made multiple attempts to achieve UHC [1]. Beginning in the 1970s, primary healthcare has been at the core of Ethiopia's healthcare approach [2]. However, health indicators suggest that progress has been slow, as Ethiopia's maternal and child mortality rates remain high despite these rates declining elsewhere. The most recent data from 2017 indicated that maternal and child mortality rates were 412 per 100,000 live births and 67 per 1,000, respectively [3].

Additionally, Ethiopia ranks 173rd on the Human Development Index, with a poverty rate of 27%, [6] and health expenditure of only 4.9% of Ethiopia's gross domestic product (GDP), the country falls short of the recommended health expenditure of 6-7% of GDP to achieve a UHC system [7]. Thus, it is evident that critical challenges and gaps in the country's healthcare system need to be addressed if Ethiopia hopes to meet its UHC target by 2030.

Health systems thinking perspective should be employed in efforts to achieve UHC, including focusing on one of the WHO's six building blocks of health systems: healthcare financing, which can be defined as the accumulation and allocation of money to cover health needs [5]. This paper will focus on Ethiopia's healthcare financing approach to achieving UHC and explore various strategies employed by other countries to recommend policy changes to improve Ethiopia's health service delivery and achieve UHC [4].

METHODOLOGY

A search strategy was developed to identify the relevant literature on Ethiopia's healthcare financing. Search terms included: “healthcare financing” AND “Ethiopia.” The search strategy was inputted into three databases: PubMed, Medline (Ovid), and Scopus, and then compiled in Covidence for screening. The PRISMA Framework illustrates the inclusion process for relevant articles. Additional articles were found using Google Scholar and grey literature from trusted organizations.

910 studies imported for screening

76 duplicates removed

834 studies screened

729 studies irrelevant

105 full-text studies assessed for eligibility

60 studies excluded

0 studies ongoing

0 studies awaiting classification

45 studies included

Figure 1: PRISMA Framework for selecting included articles

RESULTS

The healthcare system suffers from limited, inefficient, and inequitable use of resources, contributing to poor UHC [9]. To attain UHC, the Ethiopian government has scaled Community-Based Health Insurance (CBHI) by establishing Social Health Insurance (SHI) for formal sector workers [8]. The goal is to provide essential services to reduce health inequities by expanding health facilities from urban to rural areas. Alongside the SHI and CBHI, the essential health services package (EHSP) was established in 2005 and revised in 2019, to provide basic essential services and expand health facilities in rural areas [10].

Following the health insurance strategy implementation there was evidence of increased healthcare utilization, access to medicines, and quality of service [9]. However, EHSP, CBHI, and SHI relied heavily on health systems financing. Budget allocation for the public health sector was not sustainable, 40% of the revenue depended on donors and 37% came from out-of-pocket household expenses [9]. For example, the per capita drug expenditure from the government was 3.80 USD from 2005 to 2006, yet out-of-pocket household payments made up 47% of the total essential drug expense [9]. Moreover, it is estimated that a per capita of 94 USD would be needed by the SDG timeline of 2030 to implement ESHP effectively [11]. The most significant portion of the estimated health financing projection is cost accounting for 50% to 70% of expenditure, including drugs and commodities [11]. However, the realistic fiscal space to fully fund this portion is only 63 USD per capita. There is a clear gap in funding and resources to reach the next milestone of achieving UHC [11].

Although achieving complete UHC is rare in several African countries, Rwanda and Ghana made significant progress in providing insurance for their populations. The Ghanaian government created national health insurance by deducting 2.5% of the government workers’ social security fund every month to cover poor and vulnerable areas [12]. Rwanda’s health insurance was widely funded by international aid in which the government imposed new policies to reform a community-based system with individual premium payments [12].

DISCUSSION

Increasing equity in health care utilization, access to medicines, and quality of services

Ethiopia's existing healthcare financing system limits access to high-quality healthcare for populations living within lower-income, rural communities [11]. Less than 4% of spending is attributed to 20% of the lowest income populations in Ethiopia [11]. Therefore, achieving UHC in Ethiopia will increase the population's access to health care and essential medicines while also improving the quality of their care [9]. The downstream impacts of these factors will increase the utilization of health care services by increasing accessibility. Additionally, an increase in the quality of healthcare services will also encourage the population to use healthcare services [9].

Performance and coverage of UHC in Ethiopia

Currently, the UHC service coverage for Ethiopia is extremely low (34.4%) and even lower when compared with other Eastern African countries [17]. Factors contributing to this include prevalent poverty in the region, ongoing war, low literacy rate, and minimal investment in health services. WHO recommends an annual investment of 112 USD per person in low-income countries to achieve their UHC-SDG target [18], and Ethiopia has only invested 28 USD per person [19].

Developing a program that targets primary healthcare, decentralization, and an insurance system has successfully improved Ghana and India's reproductive and child health interventions coverage [13]. Thus, the evidence suggests that a UHC strategy can improve Ethiopia's healthcare systems.

Although there has been considerable progress in services designed to manage infectious and non-communicable diseases and maternal health services in Ethiopia, however coverage for these services is still deficient [14,15]. Ethiopia will benefit from better UHC financing, which involves mobilizing resources, and better monitoring and evaluation processes to ensure equitable allocation of resources.

RECOMMENDATIONS

Investing to improve the quality of healthcare is the cornerstone for achieving UHC in Ethiopia. First, UHC policies should focus to merge the existing social health insurance scheme and the CBHI scheme in Ethiopia. Implementation will be through direct tax deductions from employee payroll. For the population in the informal sector, the government should implement a monthly fee payment program, ensuring UHC is accessible to all. CBHI awareness, family health status, and quality of healthcare institutions are all factors that determine whether households want to enroll in this system.

Furthermore, sustainable awareness programs, premiums based on household financial income, and community solidarity are crucial to creating sustainable enrolment [20]. The financing of CBHI comes from premiums gathered from communities and a 25% subsidy funded by the government. Families provide monthly 0.56 or 0.80 USD, depending on region and income. If they are the poorest 10%, they receive full subsidization [21].

Moreover, the Ministry of Health should consider revising resource allocation strategies between regions. The government must prioritize redistribution of the health workforce, essential services, and access to drugs to rural areas because of increased need [16]. Studies have demonstrated that a more efficient budget structure will reduce the high burden and overreliance on out-of-pocket expenditures.

CONCLUSION

Ethiopia has made efforts to improve its healthcare system in recent years, by working towards UHC; however, significant measures need to be implemented before this goal is realized. This paper outlines recommendations aimed to implement UHC in Ethiopia through the lens of healthcare financing. By incorporating CBHI with the existing social health insurance and reallocating resources to lower-income and rural areas, the proposed recommendations aim to improve Ethiopian health indicators by ensuring equitable access to healthcare.

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OPINION EDITORIAL

Medical delivery drones as a tool to improve health equity in Sub-Saharan Africa

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INTRODUCTION

Inaccessibility to healthcare and systemic health inequities continue to adversely affect a large proportion of populations across Sub-Saharan Africa (SSA) [1,2,3]. In this paper, we will be focusing on the application of medical delivery drones within low-income and low-resource public health systems in SSA for the transportation of medical supplies, medications, biological samples, and other health-related products. Limited human and financial public health resources, rapidly rising populations, and recent infectious disease outbreaks place continuously increasing pressure on health systems. Additionally, isolated and remote communities face compounded barriers to even basic healthcare and medical supplies [1]. For example, in the Democratic Republic of the Congo (DRC), 38% of the population (approximately 30 million people) reside over two hours away from the nearest hospital facility [1]. Similarly, in Ethiopia and Sudan, approximately 30% and 31% of the population lives more than two hours from the closest hospital, respectively [1]. This is an especially critical barrier for rural communities with poor road accessibility, infrastructure, and maintenance [1], which is further impacted during the prolonged rainy seasons experienced by many countries in SSA [4].

The SARS-CoV-2 (COVID-19) pandemic has further exacerbated the already significant healthcare-related inequalities between high- and low-income countries [2,3,5]. In terms of both direct COVID-19 mortality rates as well as the collateral effects of the pandemic on global resource supply chains, health system capacity, and economic downturn, low-income and low-resource communities are those most adversely affected [3]. In sub-Saharan Africa (SSA) specifically, public health systems that were struggling pre-pandemic under the weight of communicable disease epidemics, such as tuberculosis and human immunodeficiency virus, must now take on the additional burden of COVID-19. Additionally, the COVID-19 pandemic has caused wide-ranging disruptions to communicable and non-communicable disease services in many SSA countries, leaving many people without access to treatments or care [6].

Benefits of Medical Delivery Drones

Over the last decade, drones are becoming an increasingly reliable and adaptable tool within the field of humanitarian development [7,8]. Drones, also known as unmanned aerial vehicles, are autonomous or remotely piloted aircraft without onboard pilots or passengers [9]. Drone technology is highly versatile and is currently used within the humanitarian field for purposes such as urban planning, mapping, disaster relief, environmental monitoring, and cargo delivery [7]. Drones have the potential to be a quicker and more cost-effective option for healthcare supply delivery, depending on the local context [10].

Supply chain logistics make up approximately 60-80% of humanitarian expenditures, and drones offer a significantly reduced cost compared to typical ground transportation [11]. Additionally, the ability of drones to fly the straight-line distance between two locations means they do not need to navigate poorly maintained roads or other geographic barriers [12]. While delivery drones have been integrated into public health supply chains in other low-, middle-, and high-income settings over recent years, SSA has thus far led the way in the successful implementation and deployment of drones for health-related purposes [8].

Success Stories from SSA

An ongoing drone delivery project in the East African country, Rwanda, is perhaps the most promising example of the successful implementation of drones into a public health system. The project, led by Zipline, a San Francisco drone organisation, in collaboration with the Republic of Rwanda Ministry of Health, began in 2016 and has since completed over 55 thousand successful flights [13,14]. The drones are primarily used to transport blood and blood products, emergency and routine medications, as well as emergency and routine vaccines [14]. The growing drone network in Rwanda currently serves approximately 450 individual health facilities and a population of about 8 million people [14]. Along with significantly improving access to healthcare within the country, the use of drones reduces transportation-related carbon dioxide emissions by 98% compared to the use of vans or cars [15].

Similarly, in the DRC, a collaboration between the Seattle-based non-profit organisation, VillageReach, a drone logistics company called Swoop Aero, and the DRC Ministry of Health, have been using drones for medical deliveries since 2020 [15]. As previously mentioned, 38% of the population in the DRC lives more than two hours away from the nearest hospital [4]. Along with this, the large geographic land area, armed conflicts and political instability, increasing levels of poverty, continued tuberculosis and Ebola epidemics, as well as one of the highest population growth rates in the world, have collectively stretched the DRC's healthcare system thin and created significant barriers to accessing healthcare for the country's population [17,18]. Since 2020, VillageReach and their partners have implemented a drone delivery network that serves 70 hard-to-reach health facilities and a population of over 500 thousand people in DRC's Equateur province, mainly transporting immunisation products and medical supplies [14]. Due to the success of this project, drone services will be expanded to 75 more health facilities in the Kinshasa and Kongo Central provinces of the DRC [19].

Challenges

Despite these positive use cases, it is important to note the many challenges impacting the long-term efficacy and sustainability of drone projects within SSA. While drones offer promising opportunities to increase the efficiency of health systems in low- and middle- income countries (LMICs), they are not a one-size-fits-all solution. For example, there are many common concerns regarding privacy and safety from community members in LMICs prior to the implementation of a medical drone project [20]. Such concerns include fear that drones are being used to spy on locals, worries about physical safety in the event of a crash, and overall distrust in the use of drones for health [20]. For these reasons, conducting community education and sensitivity training, as well as ensuring drones are a contextually appropriate tool are critical pre-intervention steps. There is a need for more context-specific research demonstrating ethically-centred approaches for drone project implementation in LMICs. Finally, one of the most significant barriers within the drone industry in low- and middle-income settings such as SSA, is a lack of funding, infrastructure, and general resources [21]. Without consistent financial input from local governments or external donors, it is very challenging to effectively and sustainably scale-up drone delivery services.

While significant research has been conducted on scalability from a general global health perspective [23,24], no studies to date explore processes and challenges to scalability for drone-centred public health initiatives. This should be a top priority moving forward.

CONCLUSION

Medical drone delivery, despite its challenges, is emerging as one of the most efficient ways to streamline supply delivery in LMICs in SSA. The economic benefits paired with the ability to provide rural regions, where healthcare delivery is often inconsistent and fragmented, with more access to healthcare and supplies, can improve health outcomes in the region and increase overall wellbeing. While lack of funding and infrastructure has been an issue in recent years, the emergence of the COVID-19 virus has increased the urgency for collaboration with bilateral and multilateral partners in SSA in order to optimise their healthcare system against current and future pandemics [25,26]. The use of drone deliveries may be an integral component to this response.

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Health Policy & Systems

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OPINION EDITORIAL

Navigating the Next Chapter in Mental Health And Medical Assistance in Dying Laws in Canada

Ishita Aggarwal, Queen's University

Medical Assistance in Dying (MAiD): A Brief Introduction

Medical Assistance in Dying (MAiD) occurs when an authorized healthcare professional administers medication that deliberately ends a patient's life, at that patient's request. This article provides a brief overview of Canada's MAiD law and discusses continued controversies and next steps.

Legalizing MAID

In February 2015, the Supreme Court of Canada concluded that the criminal ban on physician-assisted suicide violated the Canadian Charter of Rights and Freedoms under certain circumstances [1-2]. Shortly afterwards, on June 17, 2016, Bill C-14 was enacted, providing a legal structure for MAiD and enabling doctors to prescribe (i.e., physician-assisted suicide) or administer (i.e., voluntary euthanasia) life-ending medications when indicated [2-3].

The cases before the Supreme Court were ones of severe disabling or terminal illness; however, the Court's ruling that persons facing grievous and irremediable suffering on the basis of a serious medical condition should be able to seek MAiD was not exclusive to terminal illnesses [1-3]. Although the Joint Parliamentary Committee recommended including non-terminal disorders, Bill C-14 limits MAiD to situations where death is "reasonably foreseeable," making it a possibility in end-of-life decision-making but not necessarily beforehand [2-5].

The Immediate Response To MAiD Legalization

Since its legalization, MAiD has been quickly adopted and the number of medically-assisted deaths across Canada are steadily increasing [2-3]. In 2019, there were 5,631 cases of MAiD nation-wide, accounting for 2% of all deaths in Canada [3]. Case numbers in 2019 represented an increase of 26.1% over 2018 numbers, with all provinces reporting a steady year over year growth in the number of MAiD cases [3].

Continued Controversies Post-Legalization

Despite rising demand, MAiD remains a controversial practice. One area of political and public discussion and debate concerns the issue of whether patients whose sole underlying medical condition is mental illness should be able to access MAiD in situations where they are not nearing a natural death [2, 6]. MAiD is not like other healthcare treatments, as it involves deliberately ending a life [6]. Even when such a procedure is requested by someone who is suffering, universal availability and accessibility raises a number of ethical and moral questions [6].

Arguments in favour of offering MAiD for individuals whose sole underlying medical condition is mental illness tend to focus on concepts of undue harm and personal autonomy. Many forms of mental illness may never fully abate and hence, can be considered incurable [6]. Consequently, prohibitions on assisted suicide for mental illness may subject some people to chronic and recurrent conditions that cause, what for them is unbearable suffering, significantly reducing quality of life [2,6-7].

In these cases, some individuals may feel forced to take their own lives prematurely, for fear they may be unable to do so when their suffering reaches a point of intolerability [2,6]. Additionally, forbidding MAiD in cases of mental illness prevents Canadians from making decisions about their bodily integrity, infringing on personal liberty [6-7].

There are also several reasons against allowing MAiD for people with mental illness as their only medical condition. First, as emphasized by both the Centre for Addiction and Mental Health and the Canadian Mental Health Association, there is a lack of evidence that mental illness is an irremediable medical condition and hence, MAiD would not constitute the best evidence-informed care for these patients [6, 8]. Second, mental illnesses are diverse and develop as a result of complex biological, psychological, and social factors [6]. Satisfactory treatment requires timely, comprehensive, and multifactorial health and social supports, which are not yet available in Canada to the degree they should be [6-7,9]. Consequently, there is considerable risk that broadening MAiD access, without simultaneously increasing accessibility of and investment in mental health services along with addressing shortcomings of current treatments and supports, may reduce cultural and political urgency of improving mental healthcare accessibility and relevant preventative measures [8-9]. This, in turn, may lead patients to see MAiD as the most accessible option for them, rather than a last resort [8-9]. What is even more alarming is that this phenomenon may disproportionately affect marginalized populations [10]. Other jurisdictions have shown that groups who have been impacted by colonialism and racism, and women who have experienced sexual abuse and trauma are more likely to be recipients of MAiD for mental illness, perpetuating systemic disparities [10-11]. Finally, increasing access to MAiD may reveal higher levels of indecisiveness among some individuals with mental illness [7]. The Criminal Code mandates a ten-day waiting period between the date that MAiD is requested and the date that it is received, and requires that, MAID is requested and the date that it is received, and requires that, immediately before receiving MAiD, patients be given an additional opportunity to either reiterate or withdraw their consent [7]. In Canada, it has been found that less than 10% of requests are withdrawn during this waiting period by people with a physical illness [7]. In Belgium, where a small number of jurisdictions where mental illness may qualify for MAiD, it has been shown that 49% of requests are withdrawn by individuals with a mental illness [7]. The large number of withdrawals, albeit in a single study, suggests that assessing eligibility for MAiD in patients with a mental illness may be especially difficult and indicates that, with additional support and time, a patient who has requested MAiD may ultimately retract their request [6-7,11]. Further research on MAiD withdrawals is warranted.

Revising MAiD and Ongoing Considerations

On March 17, 2021, among heated discourse and after a year of delays, Parliament passed Bill C-7, which came into effect immediately [8]. The bill revised MAiD eligibility criteria such that “reasonable foreseeability of natural death” is no longer a requirement [8]. Additionally, it altered procedural safeguards, creating a two-track approach for healthcare professionals to follow, based on whether or not a patient’s death is reasonably foreseeable [8]. A major distinction between the two tracks is that individuals whose natural death is reasonably foreseeable no longer have to wait ten days between approval of their MAiD request and receiving MAiD, while those whose natural death is not reasonably foreseeable do [8]. Although these amendments will give some previously ineligible Canadians access to MAiD immediately, those suffering solely from irremediable mental illness will be required to wait for two years (i.e., until March 17, 2023) before applying, as per Bill C-7’s 18-month sunset clause [8].The federal government’s decision on Bill C-7 has been met with mixed reactions. Some groups and organizations have applauded it as a triumph of compassion and choice, while others have deemed it “an affront to equality” and a mistake [8,11].

Over the next two years, it is imperative that a panel of expert stakeholders be assembled and consulted as Parliament works to finalize safeguards and protocols related to mental illness and MAiD [6-7, 11-13]. Additionally, more funding should be allocated to support the scaling-up of timely, accessible, and cost-effective service delivery interventions, including psychotherapy and mental health technologies, and to strengthen management and evaluation of new and established programs and strategies [6, 13]. These steps will help ensure that this controversial move by the Government of Canada does not undermine efforts to help people who are suffering greatly with mental illness, and inadvertently do more harm than good.

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OPINION EDITORIAL

Challenges in Conducting International Clinical Research in Low- and Middle-income Countries

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ABSTRACT

The most impactful research comes from the international collaboration of researchers from interdisciplinary backgrounds. The involvement of different countries, cultures, and perspectives is needed to combat the increasingly complex healthcare issues arising today. Although it is well accepted that this collaboration is key to meaningful research, many developing countries are often underrepresented within the literature. Research from low and low-middle income countries (LMICs) is needed, but there are many challenges that come with their inclusion. These differ between country and type of trial but are generally categorized into technological, cultural and geographical, financial, political and economic, human resource and infrastructure, and operational barriers [3-4, 9-14, 16-19]. Further exploration into these challenges, specific areas of need, and potential improvements are necessary for the future of clinical research and health outcomes of the global population.

SEARCH STRATEGY

The search strategy for this literature review was aimed at identifying studies discussing the benefit of international collaboration in research, disparities in clinical research by country income, and the challenges faced when conducting research. The studies used in this review ranged from 2008 to 2021. There were no restrictions placed on the date of publication. A search using keywords and index terms was undertaken across the databases PubMed, BIOSIS Previews, Web of Science, and Google Scholar. Both the WHO International Clinical Trials Registry Platform and ClinicalTrials.gov were searched for clinical trials occurring specifically in LMICs. Lastly, the references list of all relevant articles were searched for additional studies. For example, the PubMed search was: ((Barriers OR Challenges) AND Conducting (Clinical Research OR Clinical Trials) AND (LMICs OR Low-middle income countries OR Developing countries)). Results from all searches were used to form the thematic barriers in Table I.

INTERNATIONAL CLINICAL RESEARCH

Global collaboration has been deemed as an indicator of high-quality research [1]. International collaboration within healthcare specifically allows for greater potential for discoveries of new treatments and therapies, as well as improving current ones. The integration of multidisciplinary approaches amongst skilled researchers is needed to combat the increasingly complex healthcare issues arising today. Global collaboration is extremely beneficial as it allows for the timely completion of clinical trials, the increased generalizability of results, and the inclusion of more perspectives and cultures [1]. Having multiple study sites around the world results in a more diverse sample, where more ethnic and cultural differences can be explored. The inclusion of heterogeneous populations aids in ensuring the results are more widely applicable to different people or groups [2].

This generalizability helps to maximize study outcomes. Collaboration also creates a foundation for education and mentorship among researchers [1]. The opportunity to collaborate allows researchers to share their knowledge, experience, and research methods with one another. Research procedures and standards of care vary throughout countries [3], so this dissemination of knowledge across continental divides can be beneficial in considering all perspectives. The networking and relationships made throughout the research process may even help strengthen the researcher's individual incentives and passion for conducting such research.

CLINICAL RESEARCH DISPARITIES BY COUNTRY INCOME

Despite the increases in international clinical research collaboration, there are still barriers to overcome. LMICs are resource-constrained and disease burdened countries; however, they are often underrepresented in research [4]. Data from the WHO International Clinical Trials Registry Platform indicates there was a total of 55, 062 registered trials in 2019, but only 14% of these occurred in LMICs (Figure 1) [5]. A 2018 study examined the registration of clinical trials over a seven-year period. Researchers found that only 5% of the registered trials occurred in low-income or low-middle-income countries [6]. Another study [7], also conducted in 2018, confirmed these same trends. The researchers only included oncology-related clinical trials within this study, but they still found that HICs comprised 71% of the total trials included, while LMICs only comprised 29% [7]. It is very evident that clinical trial rates remain concentrated in high-income countries (HICs), while LMICs are often less involved.

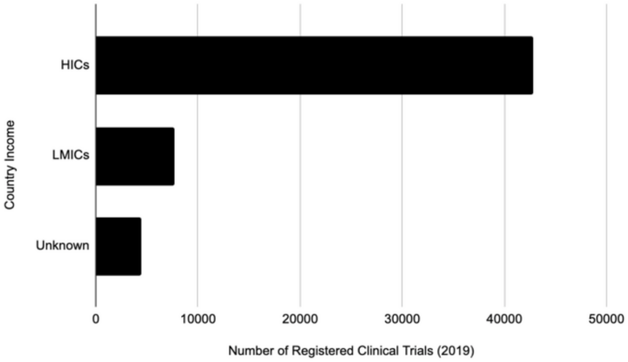


Figure 1. The number of clinical trials registered in 2019 by country income.

Data was obtained from the WHO International Clinical Trials Registry Platform (n=55, 062). Countries are broken down by income (high, low-middle, and unknown). HICs had the most registered clinical trials at 77.8% (n=42, 846) while LMICs had only 14.1% (n=7, 743).

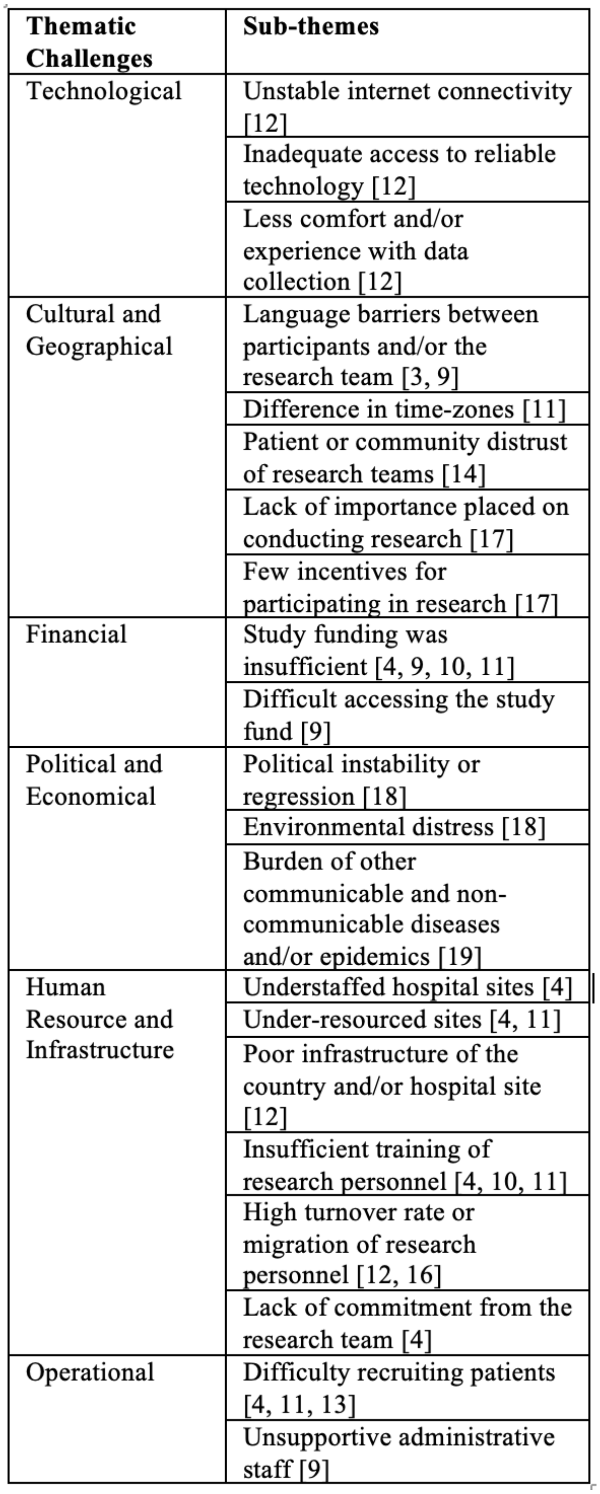
COMMON CHALLENGES IN CONDUCTING INTERNATIONAL CLINICAL RESEARCH

With any clinical trial, there are challenges and barriers to be overcome. The challenges faced while researching in LMICs, are not as well understood as the more common Western research challenges. Less developed countries are often ridden with political instability, fragile health care systems, poverty, food, and disease crises [4, 8]. Sociocultural differences additionally impact the research process. Multiple systematic reviews have broadly categorized the major challenges faced when conducting such research. These include technological, cultural and geographical, financial, political and economic, human resource and infrastructure, and operational barriers [3-4, 9-14, 16-19] (Table I). It is important to also consider that these barriers will additionally differ between country and type of clinical trial. Language barriers are routinely identified as one of the most challenging to overcome in clinical research [3, 9]. Specifically, translating informed consent forms (ICFs) poses a major threat in miscommunicating vital information to the patient, but also for maintaining data accuracy [9]. Financial barriers are often also deemed one of the more challenging [4, 9, 10, 11].

Most often, it was reported that there was simply a lack of funding to carry out the study goals. The variation in the type of trial can additionally cause a variation in the payment plans/methods used [9]. This can make it difficult for a research team to access the study funding [9]. It is worth noting that language barriers can interact with financial barriers when translating contracts and dealing with fluctuating currency exchange rates [9]. Lack of trained research personnel was found to be another notable challenge. Highly skilled researchers are necessary to carry out quality studies; however, many countries lack the proper training programs and certifications to make this possible [12]. In India, for example, researchers found that fewer than 200 of their physicians have been trained in Good Clinical Practice (GCP) [4]. Lastly, issues surrounding patient enrollment, willingness, and trust are frequently seen as major challenges. A survey given to various principal investigators (PIs) found that 44% of them ranked patient enrollment as the greatest difficulty when conducting research [13]. Patient and community distrust in research is also a growing concern, especially when involving LMICs. For many non-expert audiences, the term 'research' can lead to ideas of unethical experimentation or being perceived as 'guinea pigs' [14]. The long history of ethical breaches in clinical trials conducted in LMICs makes hesitancy more than just misperception. For example, many treatments and procedures are widely unavailable or unaffordable throughout LMICs. As a result, many people may feel that their participation in research is the only way to receive treatment [15]. This gravely compromises the values of GCP and informed consent conduct – both of which are essential for strong and ethical clinical trials.

It is important to note that this lack of trust can often stem from cultural differences or from deeper socioeconomic issues as well. For these reasons, there can be a weakened desire to participate in a trial or distrust developing throughout the trial's process for participants in LMICs.

Table I. Common challenges in conducting international clinical research



Thematic Challenges	Sub-themes
Technological	Unstable internet connectivity [12]
	Inadequate access to reliable technology [12]
	Less comfort and/or experience with data collection [12]
Cultural and Geographical	Language barriers between participants and/or the research team [3, 9]
	Difference in time-zones [11]
	Patient or community distrust of research teams [14]
	Lack of importance placed on conducting research [17]
	Few incentives for participating in research [17]
Financial	Study funding was insufficient [4, 9, 10, 11]
	Difficult accessing the study fund [9]
Political and Economical	Political instability or regression [18]
	Environmental distress [18]
	Burden of other communicable and non-communicable diseases and/or epidemics [19]
Human Resource and Infrastructure	Understaffed hospital sites [4]
	Under-resourced sites [4, 11]
	Poor infrastructure of the country and/or hospital site [12]
	Insufficient training of research personnel [4, 10, 11]
	High turnover rate or migration of research personnel [12, 16]
	Lack of commitment from the research team [4]
Operational	Difficulty recruiting patients [4, 11, 13]
	Unsupportive administrative staff [9]

CONCLUSION

The imbalance between research occurring in HICs and LMICs creates an unmet need, and consequent responsibility, for conducting relevant research in these environments. Although there has been an increase in the amount of global collaboration occurring, it is crucial that LMICs are given the opportunity to participate and contribute. The difference between LMICs and the more developed world creates a wide array of unique problems that need to be addressed. There is an extensive summary of common challenges when carrying out clinical research within the literature; however, there is a lack of comparison between countries experiencing the same issues. Connections must be made between countries so that solutions can be implemented. Improving the process in which clinical trials are currently conducted ensures more accurate data collection and results, widespread solutions, and ultimately, the improved health outcomes of the global population.

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RESEARCH ARTICLE

Strengthening Human Resources for Health: Future Contributions to Malawi's Infectious Disease Preparedness, A Literature Review

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ABSTRACT

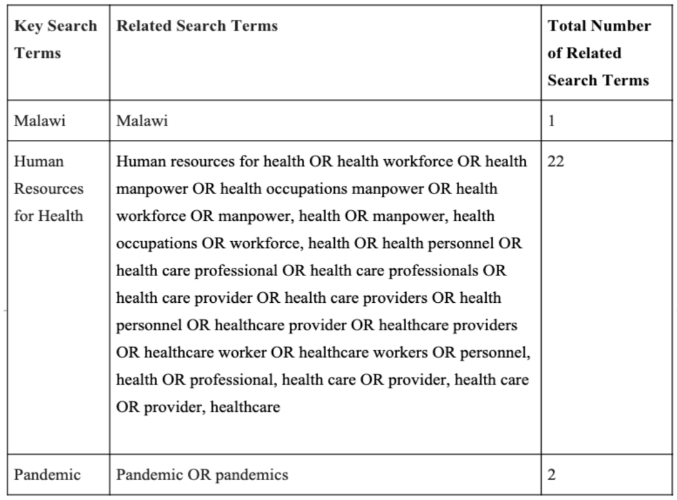
The strength of a national healthcare system and its ability to respond to infectious disease pandemics is dependent on its human resources for health (HRH). Through a comprehensive literature review, this paper seeks to assess human resources for health in the nation of Malawi and identify key challenges and facilitators to improve the country's pandemic preparedness strategies. An indiscriminate search of the literature revealed that poor HRH density due to poor renumeration and emigration and a disproportionate dispersion of HRH in urban versus rural regions are key challenges in the nation of Malawi. Utilizing Malawi's approach to the HIV pandemic and lessons from other Sub-Saharan African countries, this paper proposes three policy recommendations: improving the use of non-physician clinicians in healthcare settings, encouraging the deployment and retention of HRH in rural regions, and improving monetary incentives to avoid emigration of HRH. These policies can help Malawi to develop a resilient healthcare workforce with the capacity to effectively manage a future infectious disease pandemic.

INTRODUCTION

The ability of any country to effectively manage an infectious disease pandemic is contingent on their human resources for health density [1]. The World Health Organization (WHO) defines human resources for health (HRH) as individuals working in the private and public sectors, those working full-time or part-time, and those who are paid or provide services on a volunteer basis [1]. HRH play a significant role in infectious disease pandemics, especially in low and middle-income countries where their services are necessary to ensure the survival and resilience of affected communities [1]. Malawi currently struggles to improve her population health indices due to gaps in its HRH. Through a comprehensive literature review, this paper explores how HRH challenges can be addressed to improve Malawi's future infectious disease preparedness.

METHODOLOGY

A literature search was conducted using four databases: PubMed, MEDLINE Ovid, Web of Science, and JSTOR. The search terms used were "Malawi," "Human Resources for Health", and "Pandemic" (shown in Figure 1). Within "Human Resources for Health", we utilized synonyms and singular and plural tenses to ensure relevant studies were accounted for. Furthermore, we incorporated the plural tense for "Pandemic".



Key Search Terms	Related Search Terms	Total Number of Related Search Terms
Malawi	Malawi	1
Human Resources for Health	Human resources for health OR health workforce OR health manpower OR health occupations manpower OR health workforce OR manpower, health OR manpower, health occupations OR workforce, health OR health personnel OR health care professional OR health care professionals OR health care provider OR health care providers OR health personnel OR healthcare provider OR healthcare providers OR healthcare worker OR healthcare workers OR personnel, health OR professional, health care OR provider, health care OR provider, healthcare	22
Pandemic	Pandemic OR pandemics	2

Figure 1: Search Terminology

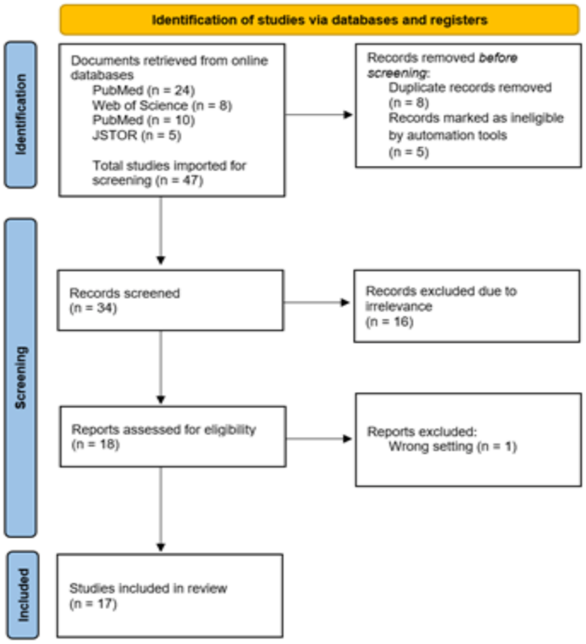


Figure 2: PRISMA Diagram. After removing duplicates, 24 articles were left, where at least two researchers identified its relevance based on its title and abstract, leaving 18 eligible articles. A full-text review was conducted to ensure significance, leaving 17 pieces for data extraction.

Three sources of grey literature and a total of 47 articles were identified to screen through Covidence. The study extraction procedure can be found in Figure 2.

DISCUSSION

Through analysis and review of the 17 selected articles, this paper presents findings from the literature search in two sections, HRH challenges in Malawi and alternative solutions to Malawi's HRH crises [2-18].

Challenges of HRH in Malawi

Poor HRH density in Malawi

Malawi's healthcare workforce has multiple factors that challenge their ability to effectively respond to an infectious disease pandemic such as shortage of healthcare workers due to emigration, and low financial remuneration [14]. The continuous loss of Malawi's healthcare workforce to migration intensified the HRH crises in Malawi, where the nursing vacancy surged to 77% in 2008 after a large emigration wave [2]. Nurses in Malawi after 1999 increased their requests to the Nursing Midwifery Council of Malawi to seek permission to emigrate and work abroad as a means of improving their financial status [2]. Malawi's Nurses and Midwives Council confirmed the impact of emigration of HRH when they stated that approximately 1,200 nurses have opted for better paying or less stressful professions that are outside of the healthcare field [14]. The disproportionate burden places front-line workers in emergency scenarios such as medical crises during a pandemic. This causes them to have to endure undue strain on an already strained HRH sector, thus minimizing the efficacy of the nation's ability to effectively manage a pandemic response.

Disparity in HRH distribution in Malawi

According to the WHO, any country with less than 2.28 doctors, nurses, and midwives per 1000 people is considered to have a "critical shortage" of healthcare personnel [4]. Malawi matches the criterion, having 0.019 doctors and 0.283 nursing and midwifery professionals per 1000 people [4]. This gap negatively affects the provision of both essential and emergency healthcare services [4]. Even though the majority of the population resides in rural areas, the healthcare workforce is centralized in urban and district hospitals [19]. Additionally, the scarcity of HRH is exacerbated by population growth, the HIV/AIDS epidemic, and an increase in the number of infectious diseases [19].

POLICY RECOMMENDATIONS

This paper provides an understanding of the root challenges that impact Malawi's HRH sector as evident in the literature. These findings propose the need for the development of initiatives designed to improve the country's pandemic preparedness responses. Considering past initiatives within Malawi and other Sub-Saharan African countries' approaches to increase the number of healthcare personnel can serve as a preliminary step to further develop an HRH sector that provides equitable and accessible care during global health emergencies [3].

Exploring the use of non-physician clinicians

Due to the extreme shortage of healthcare workers in sub-Saharan Africa, several countries have resorted to the use of "non-physician clinicians" [3]. This paper recommends that Malawi introduce a policy that promotes the issuing of healthcare funding into public healthcare institutions to prioritize training for non-physician clinicians similar to Tanzania. In Tanzania, these healthcare cadre were called "assistant medical officers" [3]. This term refers to a wide range of care providers at the mid-level, with qualifications greater than that of a nurse but less than that of a physician. Non-physician clinicians have been known to successfully undertake the medical activities of registered physicians without doctors [3]. However, they are not required to train at a medical school. Furthermore, non-physician clinicians' professional performance and high retention rates (90 percent after seven years vs. 0 percent for physicians) in rural hospitals imply that they perform exceptionally well in terrains that are not attractive to physicians. Adapting the "non-physician clinicians" approach does have promising potentials to increase the number of healthcare personnel within Malawi in preparation for the potential onset of a future pandemic.

The Christian Health Association of Malawi (CHAM) provides about 39% of all health services and is the largest religious provider in the country. The government can support organizations like CHAM to provide training for non-physician assistance, under the supervision of the Ministry of Health [20]. Non-physician clinicians have demonstrated some level of success in providing effective and accessible care in rural regions; therefore, they can form a critical mass of healthcare personnel for Malawi's rural healthcare workforce [3]. By increasing the number of non-physician clinicians in rural regions, Malawi can take action to reduce the inequity of healthcare resources amongst rural and urban regions. Increasing the number of non-physician clinicians can eventually reduce the burden on nurses, improve accessibility to healthcare services, and ultimately increase healthcare performance in rural regions during a pandemic.

Encouraging deployment and retention of HRH in rural regions

Prioritizing equity in healthcare systems can improve care conditions within regions most heavily impacted by disease spread and poor health outcomes [18]. For instance, during the HIV pandemic, there were several NGOs that supported programs to increase resources for healthcare, however, the gap in this approach involved a high concentration of NGO services in urban regions in comparison to rural regions [17]. Having a large concentration of HRH located outside of rural regions decreases the amount of care and treatment available in these severely low-income regions. Moreover, the lack of HRH in rural regions creates a gap in its pandemic preparedness and response, resulting in continued proliferation of disease. Therefore, it is recommended that Malawi government implements policies to decentralize HRH, in specific healthcare personnel from urban to rural regions, where the impacts of infectious diseases may be more detrimental.

Improving incentives to avoid emigration of HRH

Furthermore, Malawi is heavily impacted by a shortage of healthcare workers due to poor work conditions driving the work of healthcare personnel overseas. An essential component of Malawi's approach to the human resource crisis involves incentives for workers to improve retention within the force [14]. Therefore it is essential to introduce a policy that improves the financial and non-financial incentivizes for healthcare personnel to keep them within the country, and within the public sector by increasing salaries of public healthcare workers, starting in rural regions. This can increase the presence of healthcare personnel, with a focus on rural regions to reduce disease spread and improve pandemic preparedness protocol.

CONCLUSION

Our paper acknowledges the human resource crisis in Malawi, with themes including insufficient funding, lack of healthcare personnel, and inequitable healthcare resources. To address these challenges, we propose that the Malawi government implement policies to address the gaps in access to care and also increase funding for CHAM programs and public healthcare in rural regions to improve health equity and incentivize healthcare personnel to reduce migration. Through effective implementation, these policies can help mitigate current gaps in the HRH sector in Malawi to create a resilient healthcare system with an effective infectious disease response.

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Social Justice & Human Rights

Exploring the intersections of health, discrimination, injustice and international human rights.

Photo Courtesy of Andy Pham

RESEARCH ARTICLE

Gender Inequities in Global Health Leadership

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ABSTRACT

An increasing number of studies show that gender-diverse teams are more innovative, productive, and better equipped to make advancements in their fields. Despite this, women continue to be underrepresented in global health leadership positions worldwide. Women make up over 75 percent of the global health workforce yet continue to face traditional gender norms and numerous systemic barriers that prevent them from moving up the leadership ladder. This concept paper discusses these barriers to obtaining leadership positions in order to address the gender imbalances that continue to exist today. Among the growing literature in the field, this paper aims to inform staffing processes, redesign institutional policies, and improve global health organizations to reduce the inequities that women face in global health leadership roles.

INTRODUCTION

The road to achieving health equity is complex and fraught with challenges. Unlike equality, equity accounts for the social, cultural, political, or economic factors that put groups of people at a disadvantage and often results in unequal opportunities. In the context of global health, women represent approximately 75 percent of the industry, yet only hold about 25 percent of leadership roles [1].

Women have been systematically excluded from the decision-making table and are consistently underrepresented across sectors. Within the United Nations (UN) family of organizations, only 23 percent of leaders are women and only two agencies have a woman at the helm [2,3]. Only 25 percent of Chief Delegates at the World Health Assembly are women and only 33 percent of the individuals in the World Health Organization's (WHO) Director-General's office are women [4].

According to a landmark study conducted by Hawkes et al. (2017), 15 of the 18 global public-private partnerships had governing boards with five times more men than women, and GAVI was the only partnership with an explicit gender equality policy for its governing boards (p. 5). This research suggests that there are significant gaps in the gender equity policies and strategies within global health institutions.

Today's global health challenges cannot be effectively addressed without the voices and input from those who are disproportionately affected by health inequities. This representation is essential to improving policy, health decision-making, and overall public health outcomes. Thus, this concept paper will address the following questions: 1) what are the implications of gender disparity in leadership?; and 2) what barriers do women face in obtaining leadership positions in the realm of global health?

METHODOLOGY

A literature search of OVID Embase and Medline, Web of Science, CINAHL, and Google Scholar was carried out from inception until May 25, 2019. The database searches were supplemented with a hand search of The Lancet, WHO, WEF, CanWaCH, and OECD websites. The search included commentaries, discussion papers, reports, conference abstracts, and editorials.

A total of 92 records were found after duplicates were removed. Documents were screened for eligibility using the following criteria: discussed gender disparity, discrimination, or inequity in the field of global health, including organizations, institutions, and governing bodies across all sectors. Documents that solely discussed gender as a contributor to health inequities, increased morbidity and mortality, or gender discrimination in academic medicine were excluded. This was followed by a full-text review of the eligible documents.

DISCUSSION

Implications of Gender Disparity

Many papers have shed light on the impact that gender disparity in global health leadership has on societal health [1,5,6,7]. In the absence of women in the management of gender sensitive tools and global funding, key issues including child health and survival, violence against women, and maternal health are not adequately reflected in agendas and priorities [6]. As such, there is a strong link between female representation in the area of global and public health and improvements in social welfare. From a business perspective, studies have also illustrated that gender diversity on leadership teams has a positive and direct impact on the company's risk management and productivity [5,8].

Barriers to Attaining Leadership Positions

1. Cultural Norms, Career Pathways, and Mentorship

Gender roles that socialize individuals to act according to the expectations of their sex further limits the career paths that men and women typically choose [9]. Women seek and are selected for positions that tend to be narrowly defined and vertically segregated [1]. Women tend to hold positions in service delivery, quality assurance, marketing, and care services in areas including nutrition, community health, and nursing [9,10]. These positions, however, are often not typically seen as career pathways to executive leadership positions. Furthermore, the absence of professional role models and mentors who can offer both career and personal advice presents additional barriers to women accepting promotions or considering applying to positions of leadership [5].

2. Balancing Personal Life and Career

In a study conducted by Mathad et al. (2019) to investigate the gender-based challenges faced by women in global health, 47 percent of participants from three affiliated international centres reported that global health work left them with little to no time to spend with their families, and 37 percent of women reported that this impacted their decision to have children. In addition to the non-accommodating and rigid work arrangements; motherhood, pregnancy, and family are often seen as being synonymous with absenteeism, unreliability, and incompetence [1]. Consequently, mothers are often passed over for promotions, demoted after maternity leave, or fired after child-birth, leading to what is known as "reproductive role discrimination".

3. Health and Safety Risks

Acts of violence are all too common in the workplace, and women often tolerate significant trauma and hardships in order to achieve their professional goals [11]. In fact, in a study conducted by Mathad et al. (2019), 55 percent of women who participated reported experiencing either sexual harassment or assault throughout their career in global health. In recent years, the UNAIDS has been scrutinized for a number of allegations of sexual harassment, abuse of power, and bullying [14]. According to the results of a survey conducted by the UNAIDS Secretariat Staff Association between 2011 and 2018, 270 of the 465 respondents reported that they experienced some form of ill-treatment, discrimination, sexual harassment, or abuse of authority at least once by a supervisor or peer [14].

4. Wage Gap

As of 2017, women's pay was approximately that of men's pay in 2006 [15]. Across all education levels, women continue to be paid less for completing the same type of work as men [6]. Critics note that, at this rate, it will take women across the world 118 years to earn the same wage as men [15]. This difference prevents many women from striving for positions with more responsibilities as it does not necessarily translate into increased compensation, nor does it fairly acknowledge their contributions [17].

5. Institutional Policies

Global health workplace policies may not be implemented to accommodate the needs and roles of women. For example, biased recruitment policies may discriminate against women of childbearing age due to concerns of frequent absence and perceived lack of focus on their career [1]. Additionally, the absence of support for dependents like childcare and flexible scheduling may prevent women from having the necessary support to make professional advancements [7,17].

CONCLUSION

Combatting the gender gap in global health leadership is long overdue and needed now more than ever. Women in global health experience numerous barriers to attaining leadership positions due to the inherent social and cultural differences between men and women and the associated roles, responsibilities, and behaviours attributed to members of each gender. It should be noted that although this paper focused on the barriers that women experience in attaining senior positions in the realm of global health, numerous barriers also exist for other groups of people.

As we move forward towards combatting gender inequity, global health organizations must also make efforts to ensure their approaches are intersectional. Initiatives to improve gender representation should be mindful of underrepresented groups and the vast definition of gender identity. These actions are essential to ensuring that the organizations working to improve global health equity and outcomes are, in fact, representative of the populations they serve.

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REFLECTIVE NARRATIVE

Critical Analysis of Statelessness: The Problem with Assigning Labels

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Statelessness is the denial of human rights to individuals not belonging to a particular political community [1]. The international community has taken steps to address and prevent statelessness with the 1954 and 1961 UN conventions on statelessness, along with existing treaties and provisions that promote the right to a nationality [2]. However, statelessness persists, with at least 10 million stateless people globally [2]. Slow progress to address statelessness can be attributed to states' poor compliance with international human rights conventions and treaties, and inherent flaws in these instruments [3]. States ultimately dictate policy, and rules related to assigning nationality are at state discretion [3]. These rules are often based on Western definitions of citizenship and rooted in discrimination or inequity [3,4].

I assert that granting appropriate citizenship is a necessary human right and a fundamental step to addressing statelessness. However, I propose that labels utilized in political discourse and conventions to categorize stateless individuals with the intention of addressing the issue can lead to further marginalization and unmet needs of diverse stateless populations. Under international law, having citizenship is a stipulation of human rights, freedom, and protection [1]. I believe there should be no condition to accessing basic human rights- Hannah Arendt, a political philosopher, once said: "The right to have rights, or the right of every individual to belong to humanity, should be guaranteed by humanity itself" [5].

Through my Master's in Global Health at McMaster University, I was exposed to the works of Batchelor [6] and Fiddian-Qasmiyeh [7] that offer traditional and unconventional perspectives, respectively, on statelessness. Batchelor [6] discusses how poor application of international law to state legislation has contributed to statelessness by hindering appropriate determinations of nationality. Fiddian-Qasmiyeh [7] goes beyond and challenges these formal labels entirely through Palestinians' narratives of statelessness. By considering these authors' contrasting viewpoints, this paper will argue that statelessness can be better resolved when states and organizations break free from restrictive labels of statelessness and citizenship and focus on striving for human rights and health for all. I aim to support this claim by demonstrating that the utilization of narrow labels can simplify the issue of statelessness, hinder self-determination, and prevent vulnerable groups from accessing support to resist statelessness.

Many may believe that granting individuals the right to nationality under the Universal Declaration of Human Rights would prevent statelessness [3]. However, formal labels can minimize the problem of statelessness and simplify the solution to that of granting nationality. Fiddian-Qasmiyeh [7] and Batchelor [6] would all agree that not having a nationality is not merely a legal problem, but a human problem. Without a nationality, individuals are deprived of state protection and the right to vote, healthcare, education, employment, marriage, or existence [2,6,7].

Therefore, the logical solution would be to identify stateless individuals and grant them nationality based on their “genuine and effective link with a state.”6 This application of international law, as endorsed by Batchelor [6], may be a short-term solution to some of the issues stateless individuals face. However, this solution neglects the stateless experiences of marginalized groups who continue to have their existence denied. For instance, Fiddian-Qasmiyeh [7] describes Palestinian interviewees who self-identified as “stateless” even though they “legally” had nationalities. This was linked to the denial of the existence of their homeland [7]. Thus, even when Palestinians formally hold nationalities, they can still experience a “threshold of statelessness” which cannot be resolved by simply granting a nationality [7]. Further, many Palestinians have had their nationality stripped away or undermined by their state of residence [7,8]. It is clear that merely granting citizenship or assigning a label with the goal of securing rights for stateless individuals neglects the socio-political context that preserves their stateless experiences. The emphasis on assigning labels can divert broader efforts to ensure everyone can live as a national in a state they feel a sense of belonging, dignity, and safety.

Although it is essential to identify stateless individuals to protect them, it is important to remember that these individuals still possess other identities beyond a political one. Restrictive labels of statelessness can hinder self-determination and individuals' ability to decide for themselves what countries they belong to and the rights they are entitled to. Fiddian-Qasmiyeh [7] describes how a Palestinian interviewee named Fatima was upset when she was categorized as “stateless” when she first arrived in the UK, as Fatima felt she had an identity. Fatima went on to identify herself: “I am a refugee here and one day we will go to Palestine.”7 Therefore, imposing the label of “statelessness” on someone who does not identify with that label can reinforce the struggle for recognition and reproduce the denial of their rights. Labels can strip individuals of their identity and further reinforce the European colonial legacy of imposing cultural hegemony [9,10]. Current notions of statelessness in international conventions are based on Western-centric conceptualizations of citizenship and law and, therefore, I believe, should not supersede individuals’ rights to self-determination [9,10].

Despite efforts to define statelessness in international conventions, not all stateless individuals benefit equally from mandates intended to protect them. Labels used to differentiate between stateless individuals in political discourse can impede all stateless individuals from exercising their rights and obtaining support. Batchelor [6] discusses two official categories of stateless persons: those recognized under the state, “de jure,” and those not recognized under the state despite holding an ineffective nationality, “de facto.” Although it is recommended that those with de facto status be subjected to the 1961 statelessness convention, only those with de jure status are entitled to receiving assistance in obtaining a nationality [6]. Batchelor [6] recognizes that if individuals are to truly benefit from international instruments aimed at resolving statelessness, they must be labelled as de jure stateless. Therefore, these labels can prevent stateless individuals from equitably accessing their right to a nationality. Furthermore, Fiddian-Qasmiyeh [7] highlights how labels have hindered Palestinian refugees’ access to support in host countries and their “right to return” to Palestine as established in international law. Palestinians have been historically excluded from refugee and statelessness mandates and the benefits in turn [7]. Additionally, the international debate on whether granting a non-Palestinian nationality weakens their “right to return” reflects a narrow definition of statelessness [7]. Palestinians may possess the label of being a “national” of another country, but this should not undermine their right to Palestinian nationality and return to Palestine, which is important to address persisting experiences of statelessness.

By moving away from narrow labels of statelessness, states can better recognize and serve the diverse needs of stateless individuals. Statelessness policy reform needs to emphasize inclusion and ensure all dimensions of statelessness are recognized and addressed.

In conclusion, although assigning strict labels of statelessness and nationality to individuals can be beneficial in ensuring access to essential needs and rights, they can also be counter-productive in addressing the issue of statelessness. Labels can minimize the issue of statelessness, hinder self-determination, and deny individuals who do not fit into conventional categories of statelessness recognition and support. Through analyzing the authors' work, I contend that political discourse and labels can serve as distractions to the ultimate aim of upholding human rights and eradicating statelessness. Therefore, policies and programs targeting statelessness should refrain from restrictive labels and focus on providing more autonomy to individuals to define their statelessness status and selfhood. International strategies must prioritize addressing stateless people's expressed economic, social, and health needs.

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REFLECTIVE NARRATIVE

Lessons Learned Through Community-Based Participatory Research on Employment Experiences of Racialized Peoples in an Ontario City: A Reflective Narrative

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INTRODUCTION

As a group of learners and early career researchers, we reflect on our experiences developing a community-based participatory research (CBPR) project in Barrie, Ontario with the City of Barrie's Anti-Racism Taskforce on employment experiences of racialized community members. The Anti-Racism Taskforce was established in June 2020 by Barrie City Council to work with police services, school boards, community groups, municipal organizations, social services, businesses, and labour and government agencies to develop a strong understanding of the needs of racialized community members and make transformative change concerning racism in Barrie, Ontario.

We were invited to collaborate with the Anti-Racism Taskforce on this research project due to previous anti-racism education events that Erika Campbell, a member of our research team, facilitated with members of the Anti-Racism Taskforce in Barrie, Ontario in March of 2021. The Taskforce was aware of Erika Campbell's research experience and asked for her help to develop a research project that examined the experiences of racialized peoples at their place of work. Members of the Taskforce noticed that while racialized populations were increasing in Barrie, Ontario, many workplaces were still predominately white. Additionally, from 2020 to 2021, hate crimes in Barrie, Ontario rose by 50 percent, which is deeply concerning for the safety of racialized community members [1]. In a small community like Barrie, Ontario, which lacks diversity, Black, Indigenous, and People of Colour are being treated as outsiders within their own society [2]. Racially- biased police violence, non-violent and violent racism, microaggressions, and sexual and gender-based violence affect the day-to-day lives of racialized community members [3]. In workplaces across Barrie that lack diversity, racism towards racialized individuals is especially harmful when perpetrators are often not held accountable for their actions by the employer [4]. Combating racism and building an anti-racist community within Barrie, Ontario are important steps to creating a safer, inclusive city.

By working with the Anti-Racism Taskforce, we gained insights into the value of CBPR via the co-creation of a study that explores employment experiences of racialized people working within healthcare, education, policing, and the municipality in Barrie, Ontario. CBPR, as a methodology, can be broadly defined as the practice of conducting research on community issues in conjunction with those who are affected by the issues – community members [3]. Perhaps the most notable attribute of CBPR is the focus on equitable involvement of all community partners and researchers.

Within anti-racism research, this is especially important because CBPR emphasizes co-production of knowledge by ensuring research is both responsive to the needs of racialized communities and does not reproduce epistemic violence and ontological hierarchies [4]. By using this methodology within our research, we strive to foster meaningful interventions that are beneficial to the community. Through the practice of CBPR, we reflect upon the lessons learned while creating a research proposal with the Taskforce.

RELATIONALITY

In CBPR, relationships are essential to the co-construction of knowledge [5]. However, we rarely discuss the process of establishing and developing relationships between researchers and community members. Relationality within research pertains to the process of building relationships that foster compassion, respect, and reciprocity [6]. Relationality also maintains accountability on behalf of the researcher to meet the research and knowledge development needs of the community [7]. As we established relationships with members of the Anti-Racism Taskforce, we thought critically about our positionality. Each researcher has a unique social location, by belonging to different cultural, racial, ethnic, and national groups. Some members of the research team have lived experiences of racialization and racism, while others do not and belong to groups that have benefited from the social construction of racial categories through white privilege and supremacy. As researchers, we collectively hold power through our role in constructing knowledge due to traditional top-down approaches to research. These approaches position researchers as experts who choose what is researched and what knowledge is generated. As a research methodology, CBPR counters this top-down, researcher-focused approach and instead prioritizes leadership from community partners. CBPR requires us, as researchers, to remain mindful of our positionality as we conduct research with the Anti-Racism Taskforce.

When considering our positionality, we established a practice of consultation within the study, whereby all work is informed, shared, and reviewed by the Taskforce. The objective of the study – to describe employment experiences of racialized peoples working within healthcare, policing, municipal government, and education within Barrie, Ontario, was established by the Taskforce. We then designed a study, including an interview guide, to meet this objective. All feedback and recommendations from the Taskforce were discussed and incorporated to ensure we were creating knowledge to meet the needs of their community. Through this practice we situated members of the Taskforce as experts leading the direction of the research – making them researchers. We actively worked to redress power dynamics within research and this community by establishing a relationship that situates the community as knowledge holders and researchers supporting research to meet their needs.

THE ROLE OF SPACE IN COMMUNITY RESEARCH

Within CBPR, we must consider the role of space. Due to the COVID-19 pandemic, meeting community members in person in Barrie was not possible, therefore we relied solely on virtual communication to connect with the Taskforce. Without living in the community, we struggled to establish a physical connection with the space in which we were doing research, resulting in a physical barrier to conducting CBPR. Our proposal development phase was longer than expected because it was difficult to coordinate meetings to discuss the project, while working remotely. For example, each aspect of the research proposal was discussed with the Taskforce in virtual, synchronous meetings, then written into the proposal by a member of the research team, and finally sent to the Taskforce for approval. While this cycle of virtual communication took more time to develop the research proposal, compared to in-person meetings, it was a necessary process to ensure members of the Anti-Racism Taskforce were leading the direction of the study. Further, the virtual nature of our research necessitated a novel approach to building relationships with community members. During our biweekly meetings, we dedicated a significant portion of our meetings to *check-ins*, in which we shared the personal aspects of our life. We were able to celebrate each other's successes and support each other through struggles, and in this way, we built trust with one another. We also engaged in self-reflexive activities during these meetings to discuss concepts like white supremacy, misogynoir, and fragility, as well as feminist and critical race theories, to ensure our collective approach was aligned. We discussed news articles, and social media posts from Barrie community members and local anti-Racism organizations to better understand current issues of racism and activism taking place in Barrie, Ontario.

The geographic location, demographics, and infrastructure of a community are unique to that space; therefore, the issues are also distinct [8]. As researchers who are both external to the community and unable to physically be there, we could not embed ourselves in the community to understand the ways different systems and structures contribute to racism and oppression within the workplace. The Anti-Racism Taskforce was essential to teaching us about the ways that racism affects the Barrie community. The Taskforce educated us about the lack of racial parity between the increasing population of racialized peoples in Barrie, Ontario and the lack of racialized peoples employed within major employment sectors: education, policing, healthcare, and the municipality. When we structured the research proposal, we determined that data analysis must be led by the Taskforce, to ensure the themes that emerge during data analysis of interviews adequately and accurately capture the nuanced experiences of racialized community members in their workplaces. We decided with the Taskforce that all results and recommendations put forward through this research will undergo member checking, whereby participants will review the results to ensure an accurate representation of their employment experiences.

COMMUNITY INSIGHTS AND COLLABORATION

CBPR is a "systematic investigation with the participation of those affected by an issue for purposes of education and action or affecting social change" [3 p3]. The facilitation of equitable partnerships is a key tenet of CBPR, making collaboration with the Anti-Racism Taskforce essential to our project's success. Members of the Taskforce brought unique insider knowledge to the research that was used to inform the design of our study. For example, the Taskforce members determined that research must be done to explore the employment experiences of racialized people in specific job sectors such as health, policing, education, municipality, since these sectors employ a large proportion of the population and provided services widely used by the community.

Even from initial stages of collaboration with the Taskforce, this research has been directed by their experiences and insights about their community. A critique of CBPR is that researchers tend to be driven by scholarly pursuits to conduct and publish research, whereas community partners are focused on transformation within their community and ensure the research aligns with the community's priorities [9]. As researchers, we have a responsibility to achieve research objectives set by community partners [9]. Through collaboration, we ensured that both the research objectives and community needs were met. To maintain this commitment, we met bi-weekly to discuss the research proposal development and offered workshops that taught different research designs and methods; ensuring Taskforce members have the necessary skills and tools to lead and coordinate all aspects of research in the future. The Taskforce members have strong insights into the needs of their community. We recognized this as a strength, because the Taskforce can set a research agenda that will benefit their community.

However, participants of this study may be colleagues, neighbours, or friends of Taskforce members, or Taskforce members themselves, which could discourage participants from enrolling in the study or sharing their experiences honestly and openly if interviewed by someone they know. Since we do not belong to the community, all researchers felt this may also serve as a potential deterrent for people to participate. We decided to give participants a choice in who conducted their interview. When collaborating on this work together with the Taskforce, we were better able to account for the needs of participants during interviews. Through collaboration and insights of the members of the Anti-Racism Taskforce, we were better able to be of service to the community of racialized peoples living in Barrie, Ontario.

CONCLUSION

We have learned many lessons through CBPR with the City of Barrie's Anti-Racism Taskforce as we co-created a research proposal. We are grateful for the opportunity to continue to learn more about relationality, space within community research, the benefits of community insights, and collaboration in CBPR as we collect and analyze data and share the findings of this study with the community.

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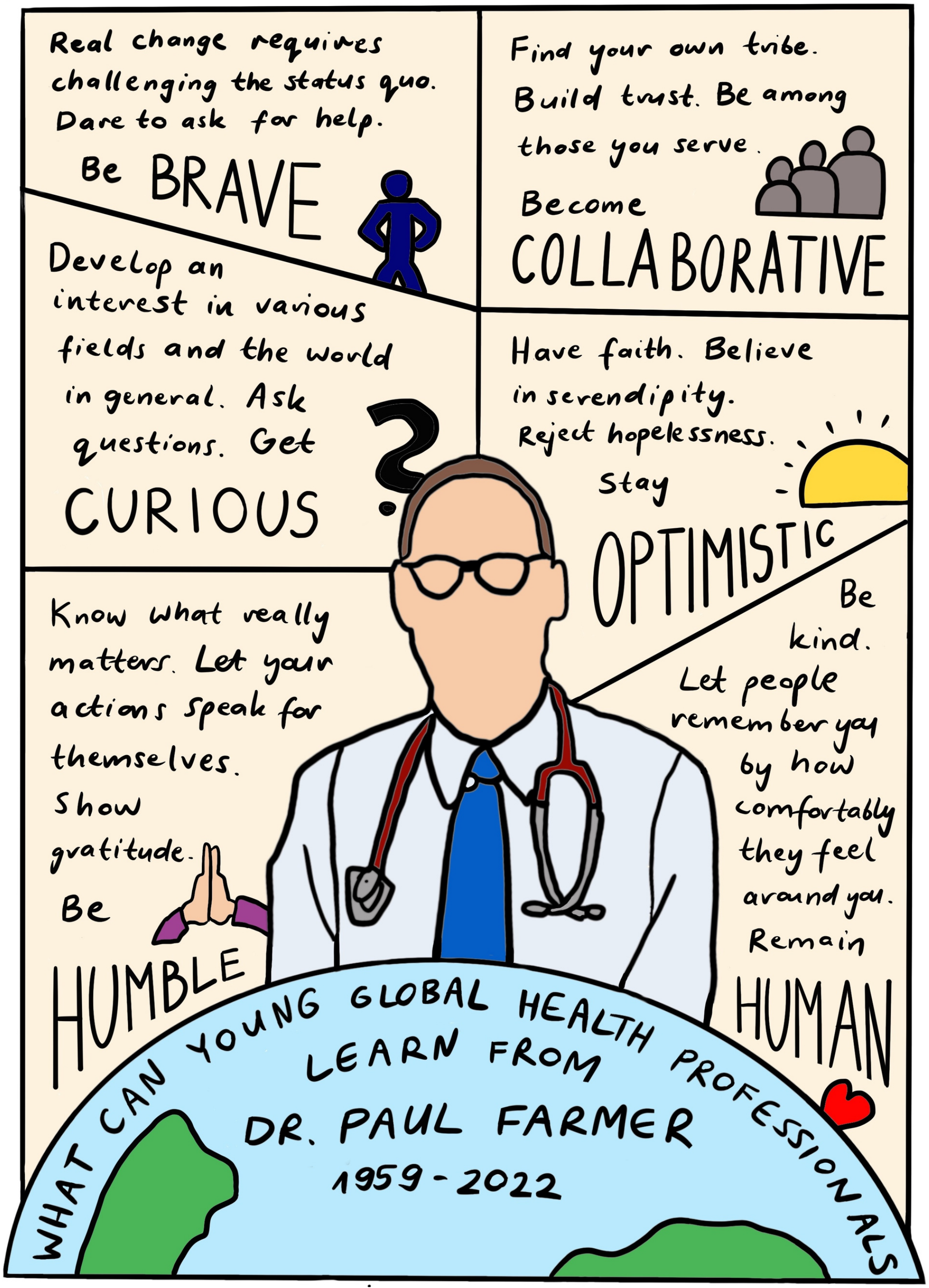
What Can Young Global Health Professionals Learn from Dr. Paul Farmer (1959-2022)

Artwork Courtesy of Maja Milkowska-Shibata



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Global Health: Annual Review (GHAR) is a collaborative journal from the Global Health Office at McMaster University, run by students, staff, and alumni.

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