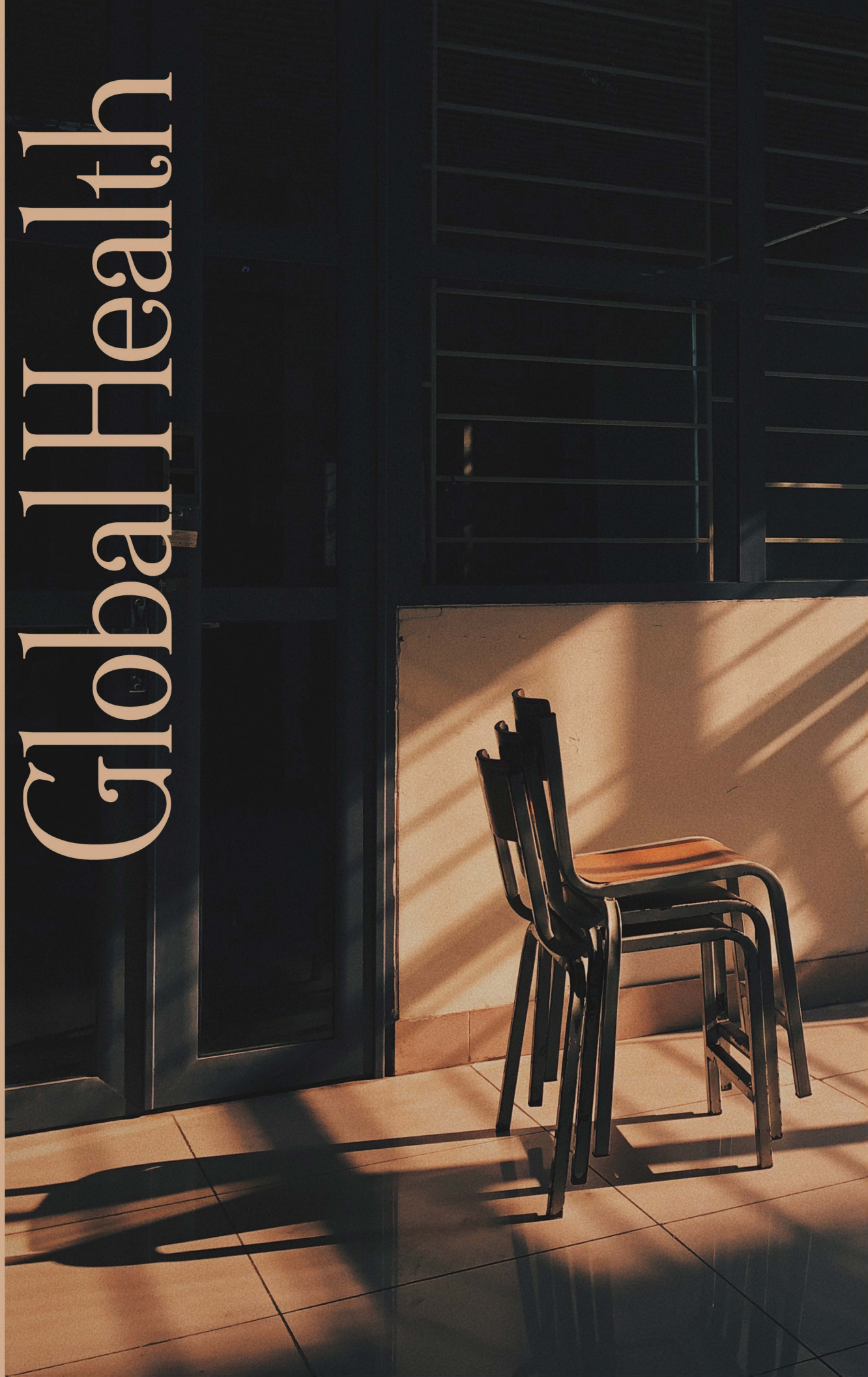
McGill Journal of Global Health



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McGill University is situated on the traditional territory of the Kanien'kehà:ka, a place which has long served as a site of meeting and exchange amongst nations. We recognize and respect the Kanien'kehà:ka as the traditional custodians of the lands and waters on which this journal was produced.

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Foreword

Dear Reader,

We are pleased to present to you Volume XII of the McGill Journal of Global Health. Originally founded in 2011, the journal seeks to provoke debate and reflection about global health by presenting articles and research on diverse health topics. Since the creation of the journal twelve years ago, we have seen discussions on global health rapidly grow. With numerous pressing global health issues – from the COVID-19 pandemic to climate change to mental health – now more than ever we must think critically about the best way forward.

The 2023 issue provides thoughtful insights on decolonization in global health education, from the implementation of global health courses focused on decolonization to the availability of U.S. global health fellowships for physicians from low- and middle-income countries. This issue also explores hepatitis C treatment in Canadian carceral settings and immigrant health and healthcare. Importantly, many of these articles recognize that working towards health equity means addressing systemic issues in Canada and other high-income countries.

We wish to acknowledge the support of McGill Global Health Programs in developing and sustaining this journal. We would also like to extend special thanks to Stéphanie Laroche-Pierre, whose unwavering support has been crucial to the journal's success this year. Finally, we wish to thank all the peer reviewers who offered their invaluable insights, and the authors for their excellent writing, patience, and dedication.

We hope you enjoy reading this issue as much as we enjoyed putting it together.

Sincerely,

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Megan is in her final year of the Master of Science in Public Health program at McGill. Her main area of interest in global health is sexual and reproductive health. She enjoys being a part of the Journal because it allows her to critically reflect on global health research and work, and learn new ways to more ethically engage in this field. She also likes spending time outdoors and trying new restaurants and cafes in Montreal!

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Palak is a M.Sc. student at McGill University studying Public Health and a research assistant with the DEPRESSD/LSR project. Through her volunteer experiences, she has become interested in addressing health challenges related to social determinants of health.

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Kieran is currently completing the second year of his Master of Science in Public Health. His interests lie in healthy aging, migrant and refugee health, and health equity more broadly. He also has a passion for music and film, and would gladly talk your ear off on whatever he's been listening to or been watching recently.

Cal Koger-Pease

Cal is a first year PhD student in Experimental Medicine researching vaccine development for schistosomiasis. They did their undergraduate degree at McGill as well in Microbiology and Immunology. Cal is particularly interested in neglected tropical diseases, and infectious diseases in general on a global scale. They enjoyed working with MJGH this year and reading all the wonderful global health related work!

Outreach Editors

Maryam El Alaoui

Maryam is a U3 Cognitive Science (Neuroscience) and International Development student, and an Outreach Editor for MJGH this academic year. She has always had a passion for global health, especially when it comes to raising awareness and educating others on global health issues that we face today. One fun fact about her is that she was able to join a youth round table hosted by Health Canada where they discussed solutions to better prepare us as a nation for future pandemics. She also loves watching movies, spending time with her friends and learning new languages.

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Daniela is currently in the second year of McGill's Master of Science in Public Health program. Over the summer, as part of her requirements for the program, she completed an internship with the Office of International Affairs in the Public Health Agency of Canada. In this placement she explored her interest in global health by working on international health policy with Latin American and Caribbean countries. She was very excited that this year she was a part of the Journal as an Outreach Editor where she continued exploring the many layers of global health.

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Andrés is in his second year of the Master of Science in Public Health program. His main area of interest in global health is mental health and social determinants of health, especially in marginalized and vulnerable populations. He joined the McGill Journal of Global Health because he enjoys the process of knowledge dissemination and translation of different research projects. Outside of school, he enjoys hiking and watching documentaries.

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Medical Deportation in the United States as an Extension of State Sovereignty: Immigration Enforcement, State Surveillance and Migrant Health

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Abstract

Although the right to health is recognized by the World Health Organization as one of the most fundamental rights of every human being, migrants encounter particular barriers in accessing health services and attaining adequate health states. There exists an interconnection between access to healthcare and precarious migrant statuses that put migrants at risk of being deported when seeking medical treatment. Medical deportation—also called medical repatriation—refers to the extralegal practice of forcibly removing immigrant and migrant patients to their country of origin to avoid the burden of costly hospital care. This analytical essay will investigate the logics and mechanisms behind medical deportation in the United States which facilitate the state's production of sovereignty through the control and surveillance of migratory populations. This knowledge will be utilized to understand the barriers faced by irregular im/migrant populations in seeking medical care and the implications of transnational labour migration and medical deportation on migrant health. Not only do irregular im/migrants face the risk of deportation when seeking medical care, shaping their health-seeking behaviours, but they are also commonly positioned in undesirable work situations that heighten their vulnerability to health risks. Moreover, the act of medical deportation neglects to consider an im/migrant's ability to access adequate healthcare within their 'home' country, further placing im/migrants in precarious health circumstances.

Keywords: immigration, medical deportation, health policy, migrant health

Introduction

Quelino Ojeda Jimenez left his small mountain village in Mexico at the age of sixteen to find work in the United States to help support his family. He journeyed to South Carolina and then moved to Georgia where he worked as a roofer. Four years later, he travelled to Chicago to work on a building near Midway Airport (1). While trying to remove a sheet of metal from a roof, he fell backwards twenty feet to the ground below. After being comatose for three days, he awoke at Advocate Christ Medical Centre, nearly quadriplegic and reliant on a ventilator (2). Quelino Ojeda Jimenez was in the U.S. illegally and after nearly four months of care at Advocate Christ, he was abruptly loaded onto an air ambulance and transported to the city of Oaxaca in Mexico, without his consent and despite his family's contestation. The hospital in which Jimenez was first transported did not have a bed for him and specialized only in emergency care (1). He was then transferred to a smaller hospital that had no rehabilitation services and lacked funding for new filters needed for his ventilator (2).

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Jimenez remained in the hospital in Mexico, four hours away from his family, for one year. He suffered two episodes of cardiac arrest and developed bedsores and a septic infection before dying at the age of twenty-one on January 1, 2012 (2).

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Increased regular and irregular migratory flows globally have led scholars to gain a distinct interest in understanding im/migrants' (a term used to include all immigrants and migrants) access to human rights and basic services within host countries. Regular migration refers to the migration of foreign nationals who comply with immigration laws, whereas irregular migration—also referred to as 'illegal' migration or migrants with 'undocumented' status—refers to the migration of foreign nationals who do not comply with immigration laws (3). Although the right to health is recognized by the World Health Organization (4) as one of the most fundamental rights of every human being, im/migrants encounter particular barriers in accessing health services and attaining adequate health states. In the U.S., irregular im/migrants are not eligible for any federally funded public health insurance programs (5). Although the Patient Protection and Affordable Care Act (ACA) was passed in 2010 with the goal of providing affordable and accessible care to the uninsured population of the U.S., the ACA prevents all undocumented im/migrants from accessing any government-based medical care (5). The only means through which irregular im/migrants can receive healthcare is under the Emergency Medical Treatment and Active Labor Act (EMTALA). This is an (unfunded) federal law that mandates hospitals to treat all patients, regardless of insurance status or ability to pay, in emergency situations (6). In summary, undocumented im/migrants in the U.S. have access to emergency medical care under EMTALA, but there is no framework to ensure long-term access to healthcare and there are few potential reimbursement mechanisms for hospitals treating uninsured undocumented im/migrants.

As a result of these gaps in policy, a budgetary burden is placed on hospitals that provide care to irregular im/migrants, blurring the line between healthcare and immigration enforcement as hospitals resort to medical deportations to avoid the costly responsibility of providing ongoing or long-term care. Medical deportation—also called medical repatriation—refers to the extralegal practice of forcibly removing immigrant and migrant patients to their country of origin in order for the health system and/or government to avoid bearing the cost of hospital care (7). Although most medical repatriations go unreported, hundreds of cases, such as that of Quelino Ojeda Jimenez, have been uncovered and the issue has steadily gained attention in American im/migration literature. However, medical repatriation is not a phenomenon that only affects irregular im/migrants such as Jimenez. Indeed, permanent residents with green cards, temporary visa holders, and at least one U.S. citizen with parents without legal documentation were involuntarily medically deported as a result of being uninsured (7). Therefore, although irregular im/migrants are at a higher risk of medical deportation, uninsured im/migrants also bear the risk of being forcibly removed from the United States when seeking medical care, demonstrating the depth and breadth of the issue. As well as having harmful implications for the lives, health and well-being of migrant and immigrant individuals and their families, the practice of medical deportation can be recognized as a state mechanism of immigration enforcement and surveillance used to regulate and monitor the presence of 'non-citizens' within a country's national boundaries. Through an examination of the academic literature on migration, this essay will investigate the logic and mechanisms behind medical repatriation as a facilitator of the state's production of sovereignty. This knowledge will be utilized to understand the barriers faced by undocumented im/migrant populations in seeking medical care and the implications of transnational labour migration and medical deportation on migrant health. Not only do im/migrants face the risk of deportation when seeking medical care, shaping their health-seeking behaviours, but they are also commonly positioned in undesirable work situations that heighten their vulnerability to health risks such as accidents, injuries and inadequate social determinants of health. Moreover, the act of medical

deportation neglects to consider an im/migrant's ability to access adequate healthcare within their 'home' country and can lead to family fragmentation and economic instability, further placing im/migrants in precarious health circumstances. This essay will first explore the relationship between medical deportation and the state, and then examine the effects of medical deportation on im/migrant health by scrutinizing both the direct and indirect consequences of the practice.

Medical Deportation and the State

i. Access to Healthcare: Membership, Deportability and Deservingness

In high-income countries, citizens of a particular state and im/migrants residing in that state have access to different degrees of rights based on their membership to the state. As Martin Ruhs (8) explains, the rights prescribed to individuals with citizenship status differ from human rights because they are derived from a relationship with a particular state, rather than from universal notions of human dignity. In other words, although human rights are based on the principles of universality (they apply to everyone everywhere) and inalienability (they cannot be denied to any human being), they are implemented and enforced differently by states based on national interests, creating a category of rights directly tied to citizenship status rather than common humanity (8). However, citizenship status is not automatically provided to im/migrants residing in a particular state and immigration policies tightly limit and regulate their access to citizenship and hence, their access to certain rights. Irregular im/migrants are ineligible for citizenship and have limited access to a number of rights on the premise that they do not belong to the national community and are a threat to national sovereignty (3). Da Lomba (3) argues that states view the right to healthcare as a membership right that they are reluctant to provide to 'outsiders within'. Although at least a degree of membership status is offered to lawful permanent residents, temporary visa holders, and U.S. citizens born to parents without legal status, individuals falling under these categories have experienced involuntary medical deportation as well (7). In this sense, medical deportations can also be seen to function under Public Charge law which allows the forced removal of migrants and immigrants based on the discretionary determination of an individual's potential to become a public burden (7). As Alonso-Yoder (9) explains, notions of public charge exclusion have developed from colonial histories and are rooted in racially-based fears and discrimination. Therefore, im/migrants of the United States experience restricted access to the right to healthcare as a result of national laws and policies that operate based on the idea that im/migrants are 'outsiders' to the national community, which is inherently rooted in racially- and ethnically-based fears and the idea that im/migrants are a threat to national sovereignty. In fact, evidence suggests that the majority of cases of medical repatriation involve individuals from Latin America (7). Given America's historical and ongoing discrimination against and exclusion of Latinx peoples, this statistic points toward prejudices being played out in hospitals, influencing their tendency to resort to medical deportation.

Not only is Public Charge law rooted in racial discrimination, the idea of deportability—the lived fear of possible deportation—is experienced by im/migrants under this law. Deportability renders im/migrant labour, and undocumented migrant labour in particular, a disposable commodity by creating a vulnerable and flexible labour force that is profoundly profitable and useful in our neoliberal market society (10). In developed countries, the demand for cheap labour is based on labour exploitability which functions under the lived fear of deportation experienced by irregular im/migrants. In other words, the creation of the 'deportable' subject under U.S. immigration law positions undocumented migrants in exploitative work situations at the whims of market capitalistic goals. This simultaneously creates conditions for adverse migrant health and well-being which can be seen through oppressive work situations and the fear of seeking care.

The notions of deservingness and 'selective inclusion' are other important concepts for understanding irregular im/migrants' access to health and medical services. These concepts are based on neoliberal ideas of individual

responsibility and self-sustainability that only grant im/migrants access to the health safety net when they are presumed to have made vital contributions to society, they are viewed as having a legitimate need for health care, or they are seen as being innocent (5). As Viladrich (5) argues, the right to healthcare for undocumented im/migrants, as is framed in U.S. news coverage, functions within a merit paradigm that grants only those among the undocumented deemed 'deserving' eligibility to healthcare and social benefits. Not only do perceptions of deservingness function within capitalistic notions of productivity, "scholars have also noted that, particularly in the developed world, deservingness categories are shaped by fear and anxiety toward the foreign born, with the public commonly considering as deserving those groups they identify with the most" (5 p1449). Therefore, racially-based fears of im/migrants are represented in immigration and public health laws and policies, creating conditions for migrant exploitation and ill health. In addition to this, widespread public discourses on the right to healthcare also function within discriminatory ideas of deservingness based on perceived productivity and relatability.

ii. Establishing Sovereignty: Immigration Enforcement and Surveillance

Nation-states view irregular migration as a threat to the internal and external dimensions of national sovereignty, such as its power to control its borders and the national community's right to self-determination (3). Moreover, foreign-born individuals have been framed by the government and the media as criminals and 'freeloaders' who threaten public health and the American public in general (5). The United States' ambivalent approach to enforcing the rights of migrants is shaped by the 'state consent supernorm,' which refers to the state's primary role in the creation, implementation and enforcement of international law, as well as its national sovereignty (3). Therefore, the restriction of migrant rights, such as the right to healthcare, can be construed as an affirmation of state power and hence, immigration policy becomes grounds for the renegotiation and reassertion of state sovereignty (3,11).

While medical deportations are recognized as an extralegal practice that functions outside of the U.S. immigration system, hospitals engaging in the practice of medical deportation supplant the state by engaging in removal in cases that the state has overlooked (7). Medical deportation has become a unique method of U.S. immigration enforcement that is produced through restrictive healthcare laws and policies that bar irregular im/migrants from accessing long-term healthcare coverage. Furthermore, it extends de Genova's (10) concept of the 'border spectacle' into the internal health service market. As de Genova explains (10), the elusiveness of the law and its relative invisibility requires the spectacle of enforcement in order to make it visible and produce racialized im/migrant 'illegality'. By increasing enforcement and maximizing arrests at the border, the 'spectacle of enforcement' is staged to enhance the impression that the U.S. has control over their border and thus, control over their sovereign territory. While de Genova (10) situates this performance at the U.S.-Mexico border, we can perceive the hospital as a second stage for the 'spectacle of enforcement' through medical deportations. Additionally, hospitals become a space for the state's surveillance of 'non-citizens' whereby health providers are required to screen individuals for citizenship status (7). Therefore, by complying with the state's healthcare and immigration laws and policies, hospitals become a state mechanism that makes im/migrant 'illegality' visible through status screening and engages in immigration enforcement through medical deportation, which together re-establishes state sovereignty.

Medical Deportation and Migrant Health

While the fear of medical deportation is a clear barrier facing im/migrants seeking care, there are numerous other factors that interact with one another to create conditions for the ill health and well-being of im/migrant populations. In fact, "[mis]representations grounded in empirically unfounded assertions, flawed culturalist assumptions, and racializing stereotypes interact with other tangible and intangible barriers to exacerbate psychosocial stress and constrain immigrants' ability to

attend to their health needs" (12 p808). In other words, although medical deportation negatively impacts the health and well-being of im/migrants in countless direct and indirect ways, im/migrants in general, and irregular im/migrants in particular, tend to be at an increased risk of injury, illness and violence. They also have an increased likelihood of confronting both tangible and intangible barriers to accessing healthcare (12). This can be witnessed through their tendency to occupy the most dangerous, dirty and demeaning jobs characterized by exploitation and precarity (5,12). Scholars have shown that irregular im/migrants are often discriminated against, not paid for their labour, overworked, underpaid or mistreated at work (13). Moreover, the embodiment of 'illegalization' and the frequent criminalization of im/migrants have important health effects. Anxieties surrounding 'illegality' can become embodied as allostatic load, which is the cumulative burden on the body due to chronic stress and life events. It can also interact with other forms of social exclusion, such as those grounded in racial-ethnic background and socioeconomic status, to further impede the attainment of adequate health statuses through the social determinants of health and access to care (12). Such ideologies about 'illegality', alongside notions of deservingness, can further affect migrant health through its internalization by health providers (5). Therefore, discourses of undeservingness can become silently embodied as allostatic load, visibly embodied through a delayed seeking of care that may appear as improperly healed fractures, late-stage cancers or festering wounds, and silently internalized by health providers, which can lead to inferior treatment (12).

Evidently, the everyday health and well-being of im/migrants is significantly influenced by many tangible and intangible factors, separate from medical deportation. However, it is essential that we also recognize the direct and indirect impacts of medical deportation on the lives, health and well-being of im/migrants and their family members. While medical deportation can certainly exacerbate the health-related factors discussed above, such as health-seeking behaviours, it can also introduce new and different health consequences to those experiencing it. General anxieties associated with coming into contact with official authorities and structures may deter im/migrants from seeking care and can become intensified when combined with fears of medical deportation, leading to the delay or foregoing of treatment. Patients being medically repatriated may also experience worse treatment outcomes in their country of origin due to inappropriate or inadequate facilities or a disregard for the patient's social and spiritual well-being, contrary to what medical transport companies may claim. This can be seen in the case of Quelino Ojeda Jimenez, where the rehabilitative care necessary for his recovery and the filters needed for his ventilator were not available in the hospital he was transferred to in Mexico (1). Moreover, the transfers themselves can be risky and may lead to the deterioration of a patient's health or even death (2).

In addition to affecting the health of the individuals experiencing medical deportation, the individuals' families can be severely affected. Deportations separate families, which can lead to economic instability and loss of support. Moreover, the repatriation of an individual to a hospital in their country of origin may place them far from any family. For Quelino Ojeda Jimenez, his wife and children lived four hours away from the hospital in which he was staying and spent little time with him because of their inability to afford transportation or accommodation (1). It is clear that countless interconnected factors in the everyday life of im/migrants lead to adverse health outcomes, which are compounded and magnified in the presence of the possibility of medical deportation. Health risks can be perceived in the type of positions irregular im/migrants tend to work, their health-seeking behaviours and the embodiment of 'illegalization' and deportability, as well as in their ability to access care after deportation and family separation.

Conclusion

While there exist no formal mechanisms for reporting medical deportations, based on current evidence, it is clear that the United States is engaging in this practice with alarming frequency (2). The United States' implementation and enforcement of international law restricts access to basic rights for irregular im/

migrants as a tactic that enforces state sovereignty (3). Through current public health and immigration policies, the U.S. engages in immigration enforcement and surveillance which regulates and monitors the presence of 'non-citizens' within its national boundaries and thus, establishes and re-exerts its national sovereignty at the consequence of the lives, health and well-being of im/migrant populations. Not only do these laws and policies directly prompt medical repatriations, but they directly and indirectly produce adverse health circumstances and outcomes for all im/migrants, with irregular im/migrants, in particular, being affected. In understanding the logic and mechanisms behind im/migrants' access to health care in the United States and medical deportation as a phenomenon, we are able to understand how 'illegality,' deportability, and undeservingness are systemically produced and how they, in turn, shape access to adequate social determinants of health and medical care for im/migrants. This knowledge demonstrates the implications of transnational labour migration and medical deportation on im/migrant health in the United States and establishes a clear need to address the overarching issues and their root causes. As was seen through the case of Quelino Ojeda Jimenez, medical deportations are a harmful phenomenon that is sure to continue as long as irregular im/migrants are ineligible for comprehensive medical coverage (14). The explicit inclusion of long-term medical care in EMTALA, and ensuring this care is entirely or majorly funded by the government, would relieve the financial burden placed on hospitals and reduce the incidence of medical repatriation. However, medical repatriation affects more than only irregular im/migrants. Permanent residents with green cards, temporary visa holders, and U.S. citizens with parents without legal documents are also at risk of being involuntarily medically deported (7). Therefore, in addition to inclusive comprehensive health coverage, there is a need for changes in widespread ideological perceptions and representations of im/migrants in U.S. society, as well as tangible and enforced laws and policies to protect their rights and freedoms.

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Knowledge is Power: Assessing Academic Decolonization through Bidirectionality of Training in Global Health Fellowships

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Abstract

There is significant support for decolonization in global health medical education, yet there is little documented on the inclusion of physicians from low- and middle-income countries (LMICs) into U.S.-based training. This paper aims to explore the options that are available to physicians from LMICs to receive academic training in global health at U.S.-based institutions and contemplate solutions that align with the ideals of sustainability and decolonization. A narrative review conducted through library databases and a web-based search of academic websites were carried out in 2022 to find programs that discussed inclusion of physicians from LMICs into U.S.-based global health fellowships. Fifteen articles were found that discussed the inclusion of physicians from LMICs into a U.S.-based program. From the web-based search, five programs plainly stated the acceptance of physicians from LMICs. Therefore, there are limited current U.S.-based academic programs accepting physicians from LMICs, based on a literature search and applicant requirements published online. This shows an important gap in training that is meant to focus on health equity and decolonization, particularly in the realm of knowledge sharing. However, this study was limited by what data was formally published through journal articles or online. Programs that have bidirectional aspects may exist but have no publication or formal website.

Keywords: global health, physician education, decolonization, fellowships

Introduction

Global health education has greatly increased over the past couple of decades, including through the formation and expansion of global health fellowships. Several events have driven the development of global health training and involvement, including the HIV/AIDs epidemic, the Ebola crises, and now the COVID-19 pandemic (1). Events such as these have highlighted the importance of strong healthcare infrastructure throughout the world and the need for enhanced training and collaboration (2). Academic institutions in the Global North have responded with a wide expanse of global health opportunities for U.S. Graduate Medical Trainees, including an increasing number of global health fellowships (3-11). Global health fellowships are formally organized training opportunities in the field of global medicine for physicians post-residency (5-6). These programs have specified training that is applicable to global health work including clinical care, research, policy, and academics. One example is the growth of Global Emergency Medicine Fellowships, in which eight fellowships were identified in the early 2000s, with now over 42 listed with the Society for Academic Emergency Medicine (12-14).

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Overall, global health fellowships in the U.S. have nearly doubled since 2010 (15-17). Other global health programs, hosted in a range of departments from Anesthesiology to Pediatrics, allow for additional training in research, diseases prevalent in low- and middle-income countries (LMICs), point of care ultrasound use, faculty development and other realms that pertain to global health and clinical medicine (6, 9, 15, 18). Many have vision and mission statements that focus on health equity, and inclusion, and many comment on the ultimate aim of sustainability of health care processes in LMICs (19). Sustainability in this case refers to interventions that can be carried out long term with increased efficiency and efficacy (19). This global health training is targeted to equip physicians, largely in the Global North, for global health challenges and to encourage research and innovation in this rapidly growing field.

Along with expansion in the academic realm, there has also been growth in the U.S. government sector. In the 2022 United States Agency for International Development (USAID) budget, $3.9 billion was allotted for strengthening global health leadership (20). These USAID funds are used for projects including, but not limited to, those focused on combatting the HIV/AIDs epidemic, lowering rates of maternal and infant mortality, and responding to infectious disease threats abroad. Additionally, the National Institute of Health (NIH) has funded Fogarty projects, a division focused on international projects, since its induction in 1968 (21). USAID contributions, as well as the expansion of academic training, show a broad-based interdisciplinary investment in building sustainability in global health work.

Within various forms of global health training there has been advanced discussion regarding decolonization and bidirectionality (1). Bidirectionality is the concept of sharing resources and input from both the Global North and Global South to better achieve equality in global health work (1, 22). Eichbaum et al. bring forth the idea of decolonization as breaking down superiority that can enforce discrimination. They discuss the idea that "knowledge is power" and that those that hold the knowledge will continue to hold power over those that do not. Education and knowledge sharing are two areas to be explored within the ideas of decolonization. When informational power and the most up-to-date academic opportunities continue to be provided to individuals from the Global North, this determines who has control. According to Bhakuni et al. there is injustice in global health academics, with biases leading to exclusions of various groups, resulting in marginalization and deficits in the affected group's credibility (23). Others have explored the idea of knowledge sharing, and how withholding information can violate one's dignity and therefore health equity as a whole (24). If governmental expansion, private funding, non-governmental organization (NGO) investment, and academic opportunities lie primarily in the Global North, with limited access for those outside of high-income countries (HICs), the risk is that these efforts could exacerbate inequity while still holding development and sustainability as a mission (1).

Multiple studies show that most U.S.-based physicians that participate in global health fellowships do not ultimately practice in a low resource setting abroad; most end up in U.S. academic-based centers (9, 12, 18). Respondents to one survey found that 28.2% of fellowship graduates went on to work in LMICs after graduation (9). Another survey showed the median time engaging in work in LMICs after fellowship was one month out of the calendar year (18). Overall, there is a distinct difference in who stays to continue to work in these communities, with more physicians from LMICs staying in their home country and providing care long term (9, 18).

Due to the factors discussed above, such as the growing number of global health fellowships, expanding financial investment and increased discussion of decolonization in academia, our primary objective was to explore the options that are available to physicians from LMICs to receive academic training in global health at U.S.-based institutions, specifically in the area of post-residency training fellowships in global health. Given the educational investment of academic centers and financial investment from the U.S. government, there is clear value placed on developing sustainable ways to

manage global health issues. Studies have shown the payoff in investing in physician's from LMICs who end up providing longstanding care in their home countries (9, 18). We evaluated the implementation of global health fellowship programs for physicians from LMICs in academic settings in the U.S. as a means of working towards sustainability. The data from our narrative review and web search was used to assess the gaps in accessibility to training for physicians from LMICs and contemplate solutions that align with the ideals of decolonization, such as inclusion when it comes to informational sharing, research opportunities, global health projects and new clinical care techniques.

Methods

PubMed, Embase, Global Health, and Web of Science databases were searched by an author and two librarians in 2022. MeSH search terms included: "global health", "fellowship", "graduate medical education", and "developing countries". "Developing countries" was chosen because search terms for LMICs did not exist or did not yield adequate results. "Global health", "fellowship", and "graduate medical education" provided us with information on the programs we were searching for. The MeSH terms for physician were excluded, as they did not narrow the search to the targeted programs [See Online Supplementary Material 1]. From here articles were screened according to the following inclusion criteria: 1) The article was written in English. 2) The article discussed global health fellowships. Articles discussing current and past programs were included, as well as articles about programs that have closed since the publication of the article. Fellowships were defined as a part-time or full-time formally organized training, with a supporting institution, in the field of global health post-residency. 3) The fellowships were based out of a U.S. academic institution. 4) The fellowship involved the participation of physicians from LMICs. There was no time limit placed on the publication date. These inclusion criteria were chosen to clearly define the aspect of training we aimed to explore, which in this case was post-residency training in global health (10, 13-14, 16).

Exclusion criteria included the following: 1) conference abstracts, 2) articles that only discussed fellowships based out of an academic center outside of the United States, 3) articles that only discussed programs that existed outside of an academic center (i.e., NGO, governmental program, etc.), and 4) articles that discussed medical fellowships that included only a global health component. A global health component was defined as an additional or limited portion of a specialty-specific fellowship, such as one designated for Cardiology or Gastroenterology. Examples of this would be a choice to travel to a LMIC or attend optional didactic sessions on global health along with specialty-specific training. We also excluded 5) articles that only involved students or health care workers other than physicians. These exclusion criteria were used to capture the most accurate results of what was defined as a global health fellowship for physicians following residency (10, 13-14, 16).

Once articles were identified through searches using the MeSH terms, the above criteria were used to exclude articles based on their format, title, and abstract. Articles that passed through this initial screening then underwent full text review and were screened for terms such as bidirectionality, inclusion, decolonization, collaboration with physicians from LMICs and their recognition as a fellow, or clear statement of participation of physicians from LMICs.

A web search of U.S.-based global health fellowships supplemented the peer reviewed literature search. This included all fellowships, as defined above, housed in departments of medicine. We used a global health fellowship database (globalhealthfellowships.org) and reviewed the program websites for application requirements and acceptance qualifications. An individual web search was also carried out to find U.S.-based programs that were not listed on the database. We assessed the database and web results for programs that discussed acceptance of physicians from LMICs in the application process or had another bidirectional training component such as inclusion in training, research, or projects. We then collected data on which institutions explicitly stated these aspects on their website versus those who did not.

Results

The initial literature review yielded 381 articles. Of these, 88 articles were duplicates and 28 articles were conference abstracts, both of which were excluded. From there, 233 articles were eliminated based on title and abstract review. After full text review, only 15 articles discussed the inclusion of physicians from LMICs. Of these remaining articles, seven discussed the Afya Bora Consortium, five discussed the Fogarty International Clinical Research Scholars and Fellows Program, and the remaining articles discussed three other independent global health fellowships (3, 22, 25-38). These included a short-term Global Patient Safety Fellowship, a one-year public and global health research fellowship called the Kuskaya training partnership, and a short-term exchange fellowship involving health professionals from Malawi, Zambia, and the U.S. (Figure 1).

In the web-based search, 108 global health fellowship programs across all specialties were identified. These included only global health fellowships as defined previously. Those that only contained a global health component in the context of a specialty specific fellowship were excluded. The departments that housed the global health fellowship programs included Anesthesiology, Emergency Medicine, Family Medicine, Internal Medicine, OBGYN, Pediatrics, Psychiatry, and

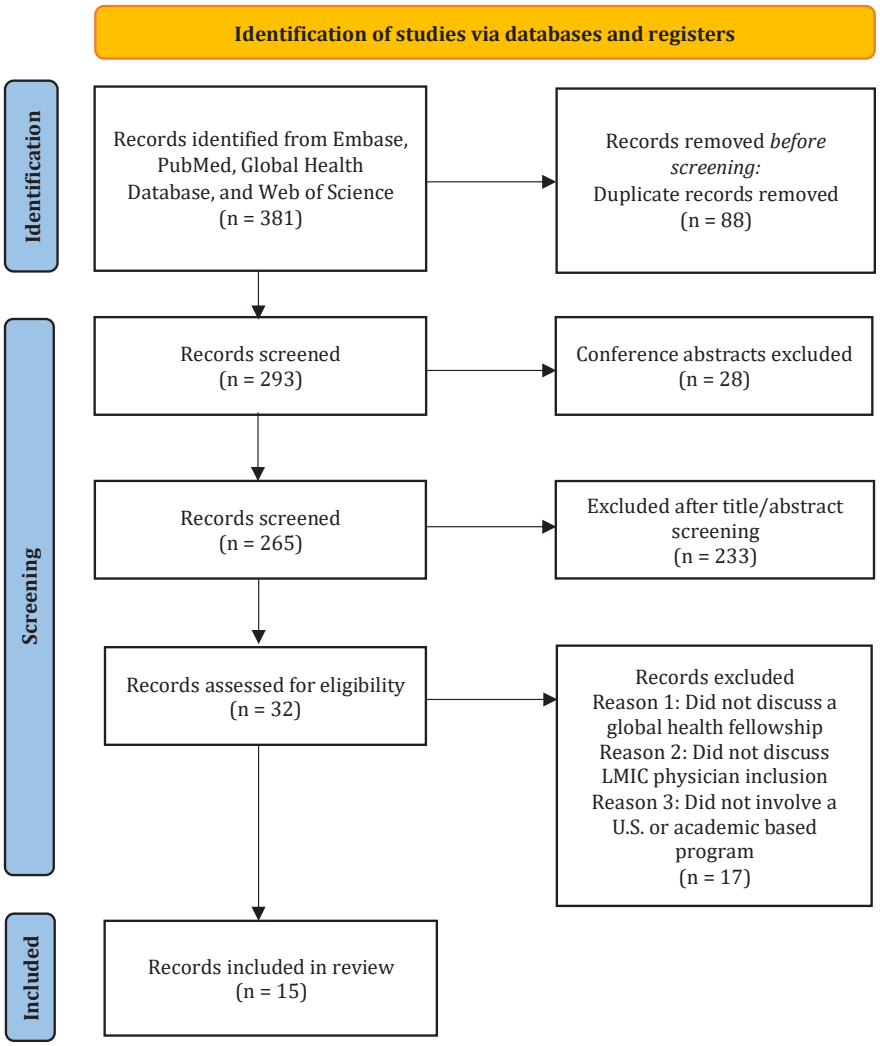

Figure 1. PRISMA diagram detailing the selection of included articles.

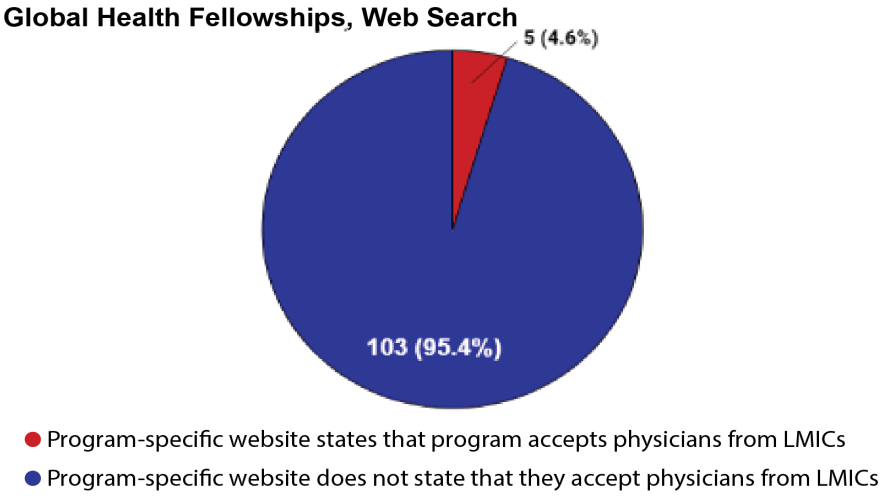

Figure 2. Proportion of global health fellowships that explicitly state on their website the inclusion of physicians from LMICs.

Surgery. There were also multiple interdisciplinary programs reviewed. The majority of the programs were within Emergency Medicine. Based on published website data, five of these programs plainly stated the acceptance or inclusion of physicians from LMICs (Figure 2).

Of the programs explicitly including participation of physicians from LMICs, the largest program was the one through the NIH's Fogarty International Center. The center funds collaborative research and includes six U.S. university consortia which partner with multiple host academic institutions in LMICs (38). There was a wide overlap between this web search and what was published in the literature, with Fogarty and Afya Bora being prominent in both. Another large program that stated inclusion of physicians from LMICs was the University of California San Francisco (UCSF) Health Equity, Actions and Leadership (HEAL) fellowship, which was found online but not in the literature.

Bidirectional Programs: Execution and Successes

Multiple programs were highlighted in the literature as having success with acceptance of physicians from LMICs. See Table 1 for participating centers and program descriptions.

One fellowship that was prominent in the literature was the Afya Bora Consortium, which provides a one-year fellowship for healthcare professionals from LMICs to be trained at a variety of U.S.-based academic centers such as UCSF and Johns Hopkins University (27). As of 2021, they had trained a total of 98 nurses, 78 medical doctors and 11 public health officials (33). Of the participants surveyed, all returned to their countries and felt that the fellowship had a positive impact on their health-related work and research capacity. The results showed 68% had an advancement in their position at work, 84% spearheaded improvements, and 97% remained in contact with fellowship colleagues (35). The article reports major successes when it comes to national health program implementation, education, and advancement of fellows into leadership positions (36).

Another fellowship widely discussed was the NIH Fogarty International Fellows program. The articles report success in using a twinning model between U.S. and international fellows, as well as implementing a Support Center to run the program efficiently (3). The twinning model involves an institution-to-institution partnership with the program run from both HICs and LMICs. There is a peer matching component with projects and educational exchanges between the two, with the goal being that the exchange is mutually beneficial. A survey of alumni, half of which were former fellows from LMICs, found that 63% remained engaged with LMICs and 70% remained involved in academics or research (22). Additionally, there were a total of 5,318 publications

Table 1. List of U.S.-based global health fellowships from the literature review that state acceptance or inclusion of physicians from LMICs.

Fellowship	Academic Centers	Description
Afya Bora Consortium	• University of Botswana • University of Buea • University of Nairobi • University of Muhimbili • University of Makerere • University of California San Francisco • Johns Hopkins University • University of Pennsylvania • University of Washington (26, 27)	Fellows take part in a teaching module, classroom sessions, and two apprenticeship opportunities. There is a curricular focus on global health leadership, management, monitoring and evaluation, grant writing and research (33). This program is currently paused.
Fogarty International Fellows program	• Northern/Pacific Universities Global Health Research Training Consortium (NPGH) • Partnership for Global Health Research Training Program (HBNU) • UJMT Global Consortium: Building Research Capacity through Mentored Training (UJMT) • University of California Global Health Institute Program for Fellows and Scholars (GLOCAL) • Vanderbilt-Emory-Cornell-Duke Consortium for Global Health Fellows (VECDOR) (38)	This is a year-long research training program that accepts health professionals and post-residency participants from the U.S. and LMICs and places them in sites around the world to carry out projects (3, 30, 37). This program is currently active.
Kuskaya training program	• University of Washington • Universidad Peruana Cayetano Heredia (25)	This program paired U.S.-based health care personnel with health professionals in Peru to complete global health work through mentorship, research, and courses (25). This program is currently inactive.
Duke Global Health Patient Safety Fellowship	• Duke University • Roosevelt Hospital/ University of San Carlos in Guatemala (34)	This program was a 4-week course for physicians from LMICs, particularly Guatemala and Pakistan, to receive training on patient safety and quality improvement as it pertains to global health (34). This program is currently inactive.
Malawi / Zambia exchange	• University of Zambia • National Institute of Public Administration in Zambia • University of Malawi • Global AIDS Interfaith Alliance in Malawi • University of Alabama at Birmingham • Samford University McWhorter School of Pharmacy • University of California San Francisco (29)	This program had a focus on global health educational exchange, teaching tactics and promotion of clinical experiences (29). This program is currently inactive.

authored by alumni (22). Individuals from LMICs deemed mentorship to be one of the most influential parts of the program and fellows from both international and U.S.-based sites reported that the fellowship influenced their career trajectories (38). A separate fellowship funded through Fogarty was the Kuskaya training program. The article reported a successful bidirectional training program that was "South driven", with an exchange of trainings between U.S.-based physicians and physicians in Peru. All participants were equal contributors of the research (25).

Further, the Duke Global Health Patient Safety Fellowship was a short-term fellowship that lasted for four weeks. The goal of the fellowship was to "train the trainer" and provide tools for individuals to bring back to their home countries (34). A short-term exchange of healthcare professionals from Malawi, Zambia, and the U.S. also reported success in achieving their objectives. Participants from Malawi and Zambia were brought to the U.S. for trainings and taught about new technologies and innovations in clinical medicine, as well as about leadership and research practices (29).

Discussion

Despite extensive discussion in journals and academia about decolonization, health equity, and diversity and inclusion in global health in recent years, our findings show a clear disparity in U.S.-based global health fellowship opportunities between physicians from LMICs and those from the U.S. While there are some examples of successful implementation of bidirectional training, the majority of programs appear to still be limiting access to resources and training by offering admission only to U.S.-based physicians.

Implementing the Idea of Decolonization and Health Equity

Based on the web data and literature review, there appears to be a lack of implementation of some decolonization ideals, with U.S.-based global health fellowships often limited to physicians from the U.S. This includes the transfer of trainees from the U.S. to LMIC settings for travel and projects. Importantly, most of these global health fellowship programs are outside the Accreditation Council of Graduate Medical Education (ACGME), which means they are at the independent discretion of the housing institution (15). These U.S.-based institutions can set their own admission criteria, including who they accept and why, and create their own independent curriculum for their programs. As discussed previously, there are examples of successful fellowships with models of inclusivity such as travel exchanges or acceptance of physicians from LMICs into programs for bidirectional projects or research (see Table 1). Outside of global health fellowships, there have been other bidirectional programs successfully implemented which involve travel or participation of trainees from LMICs in programs based in the U.S. These have included Global Surgery exchanges, an enhanced training in Oncology Care globally, and a Pediatric Critical Care bidirectional partnership (39-43). Creating more of these programs will aid in the goal of equity in resources, particularly knowledge and research opportunities, and contribute to the breakdown of power dynamics.

Benefits of Training Physicians from LMICs

There are a variety of advantages to training physicians from LMICs in global health settings in HICs, which could be carried out through global health fellowships.

First, everyone is susceptible to showing bias, and there is a need to address this in order to combat discriminatory treatment of patients (44). One step to help address this could be to expose all physicians to cultural safety training. It is also important for clinicians to work alongside peers from different backgrounds. Having structured lectures on bias, as well as working with a diverse group of individuals, can help break down stereotypes that can lead to bias in medical practice (44).

Second, it is important to consider research processes and publications. Studies have shown that researchers at academic institutions in HICs often hold more power in research collaborations and publish more than their colleagues in LMICs (25, 45-48). Inclusions in training would allow for more opportunities within research for physicians from LMICs, as well as access to mentorship.

Many studies that are carried out regarding LMICs are led by authors from HICs, and inclusivity would allow more opportunities for authorship for physicians from LMICs. Additionally, it could expand access to the most up-to-date information for physicians from LMICs (33, 37).

Experience with novel research technologies, such as newer imaging modalities, would also be beneficial for physicians from LMICs. A great example of this is point-of-care ultrasound, which allows for bedside testing and has become widely used in medicine (14). Physicians in U.S.-based global health fellowships frequently gain in-depth training and experience in the use of these modalities. Physicians from LMICs would likely utilize this technology just as much, if not more, than physicians from HICs, as many of these clinicians do not always have access to other imaging such as CT scans or MRIs (14).

Additionally, further training in diverse disease pathologies and treatments would be given to physicians from LMICs who are, long term, more likely to be exposed to them. Investing in training for physicians from LMICs would allow them to better care for their future patients and communities who face these illnesses. This is particularly important given that evidence shows that physicians from LMICs are more likely to practice in LMICs in the long-term (9, 18).

Above all, inclusion of a diverse group of physicians would create a collaborative learning and work environment that is important in the complex field of medicine. It would also work towards achieving health equity and decolonization in practice, as it pertains to training and implementation of efforts. Knowledge exchange between parties would be beneficial for all. Physicians from HICs would also gain imperative skills from their LMIC colleagues' experience in lower resource settings. Physicians in LMICs who find innovative ways to operate in health systems with less financing and resources could teach physicians from HICs valuable ideas about healthcare delivery and systems (49).

Ideally, having global health fellowships in HICs include physicians from LMICs would only be one component of a wider effort to achieve academic decolonization. The ultimate goal would be to have adequate access to academia, research, clinical knowledge and learning opportunities in all countries. Having equitable power dynamics is essential, but in the interim, sharing resources from HICs will be key to reach this end point.

Academics as a Means to Development and Sustainability

As discussed previously, most studies show that physicians from LMICs tend to stay and work in their home country for longer than physicians who are originally from HICs (9, 17). When applying principles of sustainability, investing in the training of physicians from LMICs will have a larger and longer impact on global health aspects, such as care management, research, leadership, and academia in LMICs.

Another development tool is education itself. Knowledge and training can be tools of oppression via gatekeeping, which can be used to continue to hold the informational power of one entity over another. With more equal and inclusive forms of information sharing, physicians from LMICs will be empowered with more resources and knowledge to bring to their patients and communities and to train future generations of healthcare providers. This would be a more sustainable use of information sharing, with flow going between the two parties consistently. With this, partnerships would be on more equal standing, minimizing risks of biases or one side taking advantage of another because everyone would have access to the same academic opportunities.

Challenges of Bidirectional Training and Proposed Solutions

Although bidirectional training can be beneficial, there are various challenges that may arise. Based on difficulties with global health fellowships that were discussed in the literature, we compiled a list and extrapolated further challenges we could foresee based on the ones stated (3, 7, 9, 11-13, 15, 22, 25-37). This list is not comprehensive but is meant to provide considerations and guide possible further research. Table 2 presents potential challenges with proposed solutions.

A limitation of this search is that all articles reviewed were written in English. Publications written in another language that discussed an exchange opportunity or experience could have been missed. Additionally, our search did not include partnerships with institutions that may have an exchange outside of a formal training program, or pilot programs that are not published. Another limitation is that most websites are archived if their programs are not active. This could lead to programs that included physicians from LMICs but are no longer published online being missed. There could also be participation of physicians from LMICs with projects or training in their home country, without any recognition of this stated. Lastly, this study only looked at a specific area in global health training. A variety of training at different levels of academia and in other HICs could have included these ideas of bidirectional training. Further research is needed to explore the program curricula (i.e., do the curricula themselves center decolonization) and the ideas of knowledge sharing within these other academic opportunities.

Table 2. Challenges of participation of physicians from LMICs in U.S.-based academic global health fellowships and proposed solutions.

Challenges	Proposed Solutions
Fellows from the U.S. will often use the income they generate as a practicing physician to fund their fellowship (15). If physicians from other countries are included in the fellowship programs, they would likely not have privileges to practice medicine in the U.S. and could therefore face more challenges funding their fellowship experience.	Use funds generated by U.S. fellows working to offset the cost of allowing physicians from LMICs to participate in trainings. This funding could also be obtained through private foundations, grants, scholarships, or department funds, which are common sources of support (15).
There may be visa challenges or other barriers that prevent some individuals from being present in the U.S. for training. There may also be liability in hosting from a U.S.-based program, which could vary from housing to safety of the student (50).	Expand programs which have training brought to the country of the participant. Fellows based out of the U.S. could travel to a partner site and hold academic sessions or training there. This would allow access to those in-country, with recognition of those who participate. Additionally, with the expansion of virtual learning, open access modules or learning materials can be provided to those outside of the U.S. This was demonstrated in the Kuskaya and Duke patient safety programs (25, 34)
Most training and resources may be in English, which may pose a language barrier. There may also be important cultural differences that need to be considered when it comes to the academic program (50).	Provide translators for all sessions. Written material can be translated into the participants' native language. This could be an opportunity for cross-cultural learning for all participants (for example, learning medical descriptors for pain that do not have an English translation). Additionally, sessions regarding cultural norms or practices could be included as part of the training.
There may be limitations on what portions of the curricula physicians from LMICs may take part in (ex. they may not be able to engage in clinical work in the U.S.). In some cases, it may not be fair to give them the same educational designation as others who participated in more work or activities.	Since most of these fellowships are outside of ACGME jurisdiction, there is flexibility in creating curricula. If the physician from a LMIC still participates in activities, opportunities can be provided for a designation such as "honorary fellow". Additionally, many U.S.-based physicians may receive training or education from a physician from a LMIC while in their country. Allow for distinctions for the physicians from LMICs that participate in this way.

Conclusion

Although there are increasing numbers of global health fellowships, there are limited U.S.-based academic programs accepting physicians from LMICs based on a literature search and applicant requirements published online. This work identifies an important gap in training that is meant to focus on health equity and decolonization, particularly in the realm of knowledge sharing, and supports the idea of allotting funding towards these efforts in the future.

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A Non-Specialist Treatment Model for Hepatitis C Virus (HCV) in Canadian Carceral Settings: A Telemedical Focus

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Abstract

Hepatitis C virus (HCV) is a pronounced health problem in carceral settings globally. For Canadian prisons, it is estimated that approximately 25% of those incarcerated have been previously exposed to HCV. Despite being a high prevalence context, Canadian corrections facilities have largely failed to provide adequate care to those with HCV due to their reliance on traditional treatment models. Specifically, this involves hospital-based specialist clinics for patients in corrections facilities nearby – a practice known to be associated with a low incidence of treatment initiation. This paper will explore the use of a contemporary model premised on empowering non-specialist care and the use of telemedicine. This model has found success within other global settings, as will be discussed using case studies from Australia and the United States, and other HCV literature. With the WHO setting an ambitious 90% HCV global reduction goal by 2030, it has become imperative that Canada prioritizes high prevalence populations, such as those in carceral settings, and in turn, looks to more efficient and targeted models of HCV care for these individuals.

Keywords: hepatitis C virus, treatment, incarcerated peoples, telemedicine

Introduction

Hepatitis C virus (HCV) infection is a global health challenge with an estimated 58 million people living with it in 2019 according to the World Health Organization (WHO) (1). As of 2017, the Public Health Agency of Canada estimated that there were around 317,000 people in Canada who had ever been infected with HCV, and of these, an estimated 194,000 were people living with chronic HCV (2). Injection drug use (IDU) represents the large majority of HCV cases in the country, and it contributes to around 40% of the global disease burden measured by disability-adjusted life-years (3). IDU is especially elevated among several populations in Canada, including amongst incarcerated individuals, Indigenous peoples, and street-involved young peoples (3). Henceforth, HCV is more prevalent amongst these groups.

This paper will focus on HCV as a pronounced issue in Canadian carceral settings. The disproportionate prevalence of HCV within this context is a combination of two driving factors: 1) HCV is readily transmitted through injection drug use and 2) there is an overrepresentation of individuals who exhibit high-risk behaviors like injection drug use in correctional settings (4). For Canadian prisons, it is estimated that approximately 25% of those incarcerated have been previously exposed to HCV (5). Despite being a high prevalence context, Canadian authorities have largely failed to provide adequate care to those with HCV due to their reliance on traditional treatment models (5). These traditional models involve

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bringing patients to hospital-based specialist clinics located near carceral facilities – a practice associated with a low incidence of treatment initiation (6). This is largely the result of disruptions in the HCV care continuum due to referral delays between diagnosis and treatment initiation by specialists and a lack of access to on-site specialists for HCV treatments (4).

This paper will draw from two international case studies: Project ECHO in New Mexico, United States (7) and Princess Alexandria Hospital, Brisbane, Australia (8). These were chosen based on their novel use of telemedicine to produce a non-specialist model of care for HCV and their citation in relevant literature regarding their respective successes (3,9,10,11). They will be used, in turn, to demonstrate the viability of 1) non-specialist care models and 2) use of telemedical consultation to facilitate shifts in the traditional HCV care model. These offer potential avenues for Canada to pursue when considering changes to HCV care models in carceral settings.

The traditional model of hospital-based specialist clinics (generally led by physician specialists) that provide care for people in carceral facilities is still relied upon at both the provincial/territorial and federal levels. Due to the short median lengths of stay in carceral settings – particularly at the provincial/territorial level (over one-third of these lasting less than one week and more than half lasting less than a month), the need to escort individuals for assessment and treatment at nearby hospitals becomes a significant barrier for linkage to care (5). Referral delays and lack of on-site staff to administer treatment post-diagnosis in carceral facilities mean that those entering the carceral system for short periods often leave without initiating treatment (4). In a Scottish study performed during the pre-direct-acting antiviral (pre-DAA) era, a time in which interventions to eliminate HCV were time consuming and featured a high treatment burden, HCV cure rates were significantly lower for those who were released while undertaking treatment in the carceral system (45%) as compared to those who completed their treatment while incarcerated (74%) (12). This, in turn, reflects how disruptions in the HCV care continuum (due to referral delays and lack of access to direct treatment), in conjunction with shorter stays, result in reduced cure rates. With the WHO setting an ambitious 90% HCV 2030 global reduction goal (13), it is imperative that Canada prioritizes populations experiencing high prevalence and incidence of HCV, and thus, look to more targeted strategies for HCV care. Implementing a non-specialist treatment model for HCV care with a telemedicine focus offers a promising solution to addressing the issue of inadequate HCV care within Canadian carceral settings.

Approaches to Improve HCV Care in the Canadian Carceral System

Introducing a Non-Specialist Treatment Model

Within carceral settings, a shift towards a treatment model that empowers non-specialist healthcare providers in conjunction with the use of telemedicine offers an alternative to the current status quo in Canada. Essentially, for on-site services, components of the care cascade (steps in delivery of HCV care from diagnosis to access and retention for the purposes of care and treatment) could be transferred from hospital-based specialists to skilled nurses or general practitioners (non-specialists). DAA treatments can be delivered through simplified models of care, including through primary care settings, which have been shown to be more cost-effective and improve treatment uptake compared to hospital-based care (14).

In this model, from the point of contact in carceral settings, staff evaluate patients by completing standardized procedures that involve a mental health assessment and physical examination, a targeted review of medical history, and fibroelastrography in order to stage hepatic fibrosis (this is because liver damage is a potential consequence of chronic HCV) (14). Once this evaluation is complete, nurses triage the cases based on the severity and risk of adverse events while engaging in a treatment program. High-risk patients are transferred for in-person assessments with specialists, medium-risk patients engage in telemedical consultation with a specialized physician, and low-risk patients are discussed in a teleconference without disclosing the

patient's identifying information and are prescribed the appropriate DAAs (14).

Telemedicine plays a critical role in this model – particularly through its modalities as both a means to train non-specialists, and also as a mechanism for telemonitoring (tracking various patient parameters remotely like blood pressure, pulse etc.). The use of telemonitoring is evident in the triage system. Telemedical education is also a critical aspect of telemedicine as it incorporates multiple carceral and non-carceral stakeholders to produce an integrated HCV model of care[1] (15).

Integrating Telemedicine into a Non-Specialist Treatment Model

1. Telemedical Education for Non-Specialists – Project ECHO, New Mexico, United States

To train non-specialists, telemedical education can serve as an important tool for knowledge transfer. Not only does it help overcome geographic barriers between specialist providers and non-specialists, but it helps to better integrate multiple stakeholders in a model of HCV care in which non-specialists can connect with specialist care providers, carceral departments, academic medicine, and public health offices.

Project Extension for Community Healthcare Outcomes (ECHO) in New Mexico was a ground-breaking mixed-methods study piloted in 2004 that employed telemedical education to train non-specialists in HCV care for rural communities (7). The program employed learning loops and case-based knowledge networks to enable both specialists and non-specialists to co-manage patients. Nurses and general practitioners gained intimate domain expertise in HCV through case-based learning clinics that enabled them to work with experts in HCV nationally[2] (7).

Though implemented at the community level, the potential of telemedical education from this study has helped to inform the training mechanisms necessary to implement non-specialist treatment models in carceral settings at a global level. The Project ECHO study not only demonstrates the ease in which knowledge can be transferred through telemedical education, but also the importance of an integrated approach to HCV care that incorporates multiple health stakeholders. This modality of telemedicine could be implemented in Canada. Frequent reference of Project ECHO in systematic reviews of non-specialist models of HCV care, as well as in global case studies that focus on non-specialist models in carceral settings in a positive manner, could provide the necessary precedent for considering its use in a Canadian setting (3,9).

2. Telemedical Consultation Mechanisms – Princess Alexandra Hospital, Brisbane, Australia

A telementoring service was employed to facilitate the administration of a non-specialist model of care between Princess Alexandra Hospital Secure Unit and five Queensland carceral facilities (8). Videoconferencing was used to support a triage system and to connect specialists and non-specialists in assessing patients, prescribing medication, and reviewing treatment courses.

The telemedical consultation system helped to increase access to HCV treatment for incarcerated peoples substantially – a major problem before the study was initiated (8). This was due to an increase of in-reach services because of a greater presence of upskilled staff (staff now trained in HCV care) who could identify patients suitable for treatment. The study notes that "[incarcerated peoples] were grateful to receive therapy quickly and without the burden of travel to tertiary facilities" (8 p.693). Knowledge gains were reported amongst non-specialist staff and broader organizational improvements in HCV care were noted – particularly in the improved coordination of service (8).

[1] This also ensures non-specialists have the necessary knowledge of virus assessment, treatment, and management.

[2] Ranging from university specialists in hepatology to leading psychiatrists and experts in substance abuse to help develop their knowledge of HCV care.

This case study directly reveals the potential benefits that could accrue from the transition to a non-specialist model of HCV care premised on the use of telemedicine. Serving as direct precedent for implementation in a carceral setting, this case offers an insight into the benefits of an integrated model of care for HCV using telemedicine, including better HCV treatment access for incarcerated peoples, and greater organizational efficiency[3]. Similar to the Canadian situation, the Queensland carceral facilities had previously relied on a hospital-based specialist clinic model to provide care.

Discussion

Addressing the Issue of HCV Care Cascade Disruption and Short Carceral Stays

Evidence from the international cases described has demonstrated that a non-specialist model could help to specifically address the issues of treatment cascade disruption currently faced by the Canadian carceral system. Results from the Princess Alexandra case study showed how there were significantly shorter delays in patient screening, assessment, and treatment; and thus, more effective completion of the HCV care cascade. Furthermore, with the issue of shorter carceral stays at the provincial/territorial level, faster transitions between the steps of initial screening to treatment through the non-specialist model could significantly improve treatment initiation and cure rates. Project ECHO has also shown that geographic barriers that can arise at the provincial/territorial level could be overcome by using telemedical consultation and training – especially given the often more remote nature of some carceral facilities in Canada that lack access to specialist care (16). As a result, a non-specialist model using telemedicine would significantly reduce wait times for incarcerated peoples who require HCV care.

Compatibility with a Canadian Context

In addition to the precedent that international cases establish for the use of a non-specialist model for HCV care in a carceral context, there is also evidence for compatibility within a Canadian context. A study conducted in 2017 on the use of DAA Therapy for HCV care using telemedicine in Ottawa found that patients achieved high Sustained Virologic Response (SVR) that were comparable to a traditional hospital-based model (17). The study specifically sought to target individuals in under-served and remote areas; however, it closely paralleled the Project ECHO study in its methodology (17). Ultimately, the study suggests that the benefits described at the international level also have been realized at a local level through the use of a telemedicine-integrated non-specialist model of care. This shows significant promise for implementation in Canadian carceral settings due to success at the community level.

Presence of Complementary Measures - Harm Reduction

The extent to which HCV care is effective is impacted by the presence of complementary care measures such as harm reduction services. Therefore, shifting models of care may not have their intended effects unless they are accompanied by changes to such services – thus, raising the cost of transition (6). Since HCV is readily transmitted through injection drug use and there is an overrepresentation of individuals who exhibit high-risk behaviors like injection drug use in carceral settings, an approach employing harm reduction is vital to any sort of improved model of care.

However, it is important to note that cases such as Project ECHO demonstrate how an integrated care framework can be achieved using a non-specialist model that also incorporates existing services – such as harm reduction services (7). Though there are some costs to integrating existing services into such a model through the telemedicine channel, costs can be offset by greater organizational efficiency for carceral health systems as demonstrated by the Princess Alexandra case. Furthermore, from the perspective of the participants in the Princess Alexandra case, greater integration of

[3] Costs were also significantly lowered by avoiding prisoner transport – a significant geographical financial burden given the more remote nature of some carceral facilities in the study.

existing harm reduction services within a non-specialist model ultimately produced a more positive outcome for access to treatment and virus management more broadly (8).

Continuity of Care Post-Release

Another potential drawback of a non-specialist model is that community health facilities used in the hospital-based model may provide greater support for continuity of care and treatment retention post-release. Seeing as patient stays can be shorter at the provincial/ territorial level, hospital-based clinics provide a place that those who at least have had a diagnosis can visit for further care (18). This also applies to individuals at any point of the HCV care continuum who have not fully been cured.

Though this is certainly possible, it is important to note that specialist clinics would still exist at the community level despite a model shift in carceral systems. Based on the telemedicine approach suggested in this report, a care continuum can still exist post-release if specialists are able to connect and refer patients to primary care physicians using telemedical consultation. Specialist providers are not completely removed in a non-specialist model, but rather, the presence of upskilled HCV care staff will complement their services to a greater degree. The non-specialist model would likely reduce the burden on tertiary facilities outside of prisons that patients might seek to use post-release seeing as more primary care staff are trained to focus on incarcerated peoples.

Conclusion

This paper ultimately recommends that the Canadian carceral system adopt a non-specialist treatment model for HCV care with a telemedicine focus. A non-specialist model has the ability to expand in-reach services by increasing the number of upskilled staff that are knowledgeable about HCV diagnosis, treatment, and management on-site, thus, preventing disruptions in the HCV care cascade. International cases such as Project ECHO and Princess Alexandra establish a precedent for the potential of a non-specialist model to be employed in a Canadian setting through their use of telemedicine modalities as both a training and consultation tool. Furthermore, the successful use of telemedicine for HCV care at the Canadian community level shows great potential for this paper's recommendation. Not only does the model specifically address disruptions in the HCV care cascade and short stays in the carceral system that are issues specifically present in Canada, but it also can be integrated with existing harm reduction services. The model also supports continuities of care post-release by taking pressure off specialist clinics.

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What can an Interprofessional Global Health Course with a Focus on Decolonization Bring to Students? A Qualitative Study

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Abstract

Many voices have called for dismantling the colonial legacies that permeate healthcare systems. McGill's Interprofessional Global Health Course 2021 online edition adopted the theme of decolonizing global health. This study aimed to understand the perspectives of students enrolled in this course on a) colonial patterns embedded in global health, and b) future actions that students can take to decolonize global health. A qualitative descriptive methodology was employed. The study population included students who completed the course during the Winter 2021 semester. Following the last session, students were asked to answer four open-ended questions. The answers were analyzed thematically using inductive and deductive coding. Eighty-one of the 105 students registered for the course answered the questions and data saturation was reached after analyzing 24 answer sheets. Two themes emerged: the course informed students about the role of colonial legacies in shaping global health systems and the course helped students understand global health decolonization and plan to take relevant actions. To promote global health decolonization, future healthcare workers need to be sensitized to the ongoing impacts of colonialism. Healthcare education can serve this function through the examination and modification of curricula, but also through the employment of innovative educational approaches that help students reflect on their professional roles and responsibilities towards global health decolonization.

Keywords: decolonization, global health, health education, colonial practices

Introduction

Colonial and imperial relationships between regions and people have had lasting structural, social, and psychological impacts (1, 2). Colonial patterns continue to perpetuate power asymmetries that benefit certain groups, areas, and countries over others (3, 4). These colonial patterns even operate in subtle ways that divide the world when engaging in global health research and practice (5-7).

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To decolonize global health is "to remove all forms of supremacy within all spaces of global health practice, within countries, between countries, and at the global level" (8 p.1627). As such, global health decolonization calls for dismantling policies and structures that favor certain populations, areas, and countries over others (e.g., Global North over Global South) (9). This includes acknowledging and battling the lingering impact of colonial concepts that have shaped global health systems, namely settler colonial privilege, eurocentrism, and white supremacy (10).

While the literature on global health decolonization goes back to the 1970s (10, 11), such discussions did not figure prominently in scholarship or public discourse (12, 13). This situation has changed, particularly in the past five years. Scholarship has pointed to the ongoing problems of health disparity and the types of international responses to health emergencies. The COVID-19 pandemic has shed further light on power asymmetries stemming from colonialism that dominate all aspects of resource distribution (e.g., vaccines), as well as inequitable and discriminatory governance practices (13-15).

As such, several global health researchers and educators have called for decolonization in the education of health professionals, arguing that this would positively challenge the current depoliticized and historical approaches of teaching global health (16-20). In response, many health professional schools are working to decolonize global health curricula, employing "an interdisciplinary approach to revealing, analyzing and responding to the legacies of imperialism that permeate the healthcare system and create health inequities" (18 p.2). Similarly, the McGill Interprofessional Global Health Course (IPGHC) was offered with a focus on decolonization for the first time for the course's 14th edition in the winter of 2021 (21).

To expand our understanding of postcolonialism in global health education, our team examined the perspectives of students enrolled in the 2021 IPGHC on: a) colonial patterns embedded in global health, and b) how the course might have informed actions students can take to decolonize global health.

Interprofessional Global Health Course (IPGHC)

The IPGHC is an interdisciplinary student-led initiative by McGill's Global Health Programs in the Faculty of Medicine and Health Sciences, initiated to expand global health content across programs in the faculty. The course is open to students in different healthcare fields, such as dentistry, medicine, nursing, and physical and occupational therapy, as well as students in other faculties. The Winter 2021 edition of the course ran from January 12th to April 30th, 2021, on a virtual platform and was comprised of ten two-hour lectures given by experts in their fields. Topics discussed were introduction to global health; racism in health; health politics and policy making; global oral health; reproductive, maternal, and child health; Indigenous health; environmental health; global mental health; humanitarian health; and advocacy and global health. Speakers were asked to use a decolonizing lens when presenting their content. Students also had the opportunity to discuss, reflect, and share with their peers via activities during lectures. The courses objectives were:

1. To increase student awareness of the global burden of diseases and the geopolitics of global health.
2. To increase student awareness of colonial patterns in global health systems, practices, and education
3. To expose students to the realities and challenges of decolonization that health professionals face in a global and local context.
4. To provide a framework for students to approach global health decolonization.
5. To encourage interprofessionalism by facilitating collaboration and communication amongst students.

Methods

Study design

We conducted a qualitative descriptive study to explore students' understanding of concepts related to global health colonialism and decolonization. This exploratory methodology allows researchers to remain close to

the data and avoid "reading into, between, and over" the participants' words as it seeks to understand and describe the meanings that participants attribute to an event or phenomenon and provide a comprehensive and coherent summary (22, 23).

Participants and setting

Eligibility criteria for participation in the study included 1) McGill students who were registered for the course, 2) who attended at least 8 out of 10 sessions of the course, and 3) who answered the question guide distributed at the end of the course as part of the course assignment.

Data collection

Ethics approval was provided by the Institutional Review Board (IRB) of McGill University (A12-E99-09B). Students provided written responses to questions informed by the literature on global health decolonization (6, 12, 13, 15) and relevant to the course's objectives:

1. In what ways did this course enhance your knowledge of colonial practices in global health?
2. Based on your learnings through this course, what does decolonizing global health mean to you?
3. How did this course help you develop skills required for global health decolonization?
4. How do you see yourself integrating global health and its decolonization in your future practice?

Upon registering for the course, students were informed that answering surveys and questions would be part of the course assignments and that their answers might be anonymized and used for research purposes following McGill IRB guidelines and standards. We suggested a word limit of 200 words for each question but encouraged students to elaborate on their perspectives as desired.

Data analysis

We used a maximum variation sampling strategy which entails choosing heterogenous participants in terms of background and characteristics. This strategy increases the likelihood of covering the most diverse range of perspectives found in the larger population – an ideal in qualitative research (22, 24). As such, we consulted the answer sheets of students of various genders, educational fields, and study levels (see Table 1). Analysis was stopped once we reached data saturation, which is the point when new data does not generate new codes or themes (17).

We performed a thematic content analysis of students' answers to the questions with the help of MaxQDA software. The analysis was guided by the World Health Organization (WHO)'s "Framework for tackling social determinants of health inequities", which informs public health professionals' actions on four levels: micro level (individual), meso level (community and institution), macro level (society and public policies), and globalization environment (global and international level) (25). Accordingly, we categorized students' perspectives and suggestions for global health decolonization into four similar levels.

The analytic process included a combination of deductive and inductive coding of the transcripts (26, 27). We first drew codes from concepts related to the WHO's "Framework for tackling social determinants of health inequities" (deductive coding) (28). Then, we generated codes during data interpretation, "without trying to fit the data to pre-existing concepts or ideas from theory" (inductive coding) (24 p.252).

To ensure the trustworthiness of results, we used triangulation, a "validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study" (29 p.126). As such, our authors analyzed the same 24 answer sheets separately and later compared their codes and themes. This allowed us to examine data through different lenses and unify the results through discussions and consensus. We also held debriefing sessions with the faculty supervisors to improve the credibility of results and validate the codes and coding process (19).

Results

Of the 105 students enrolled in the course, 81 met the eligibility criteria. Analysis was performed on 24 answer sheets. There was an almost equal number of male and female students' answer sheets analyzed, from the following healthcare fields: nursing, medicine, dentistry, physical and occupational therapy, and dietetics and human nutrition. Most students (20) were doing their undergraduate studies while a minority (four) were attending graduate programs.

We identified two themes after analyzing the data: the course informed students about the role of colonial legacies in shaping global health systems and the course helped students understand global health decolonization and helped inform future planed actions towards decolonization.

The course informed students about the role of colonial legacies in shaping global health systems

The students stated that the course helped them realize the extent to which colonial legacies shape and influence current health systems and the mechanisms through which colonial ideals permeate these systems on local and global scales. The students also learned about white supremacy and saviorism, male dominance, and Eurocentrism, which still favor and maintain colonialism and dominate local and global health systems, structures, and practices.

> *This course has significantly enhanced my knowledge of colonial practices in global health. It has made me understand that the entire field has originated from Tropical Health which was mediated by wealthy countries to provide medical attention to their troops in the colonies. (Student 7)*

The course also helped students understand the role of colonialism in shaping global health agendas and policies. For instance, they reported learning that global health stakeholders have historically favored the Global North over the Global South, attributing more resources to the former while disregarding the latter's expertise.

Table 1. Demographic characteristics of participants.

Characteristcs	# of Participants (%)
Gender	
Male	11 (45.83)
Female	13 (54.17)
Educational Field	
Nursing	6 (25.00)
Medicine*	6 (25.00)
Dentistry	4 (16.67)
Dietetics and Human Nutrition	2 (8.33)
Physical or Occupational Therapy	6 (25.00)
Study Level	
Undergraduate studies	20 (83.33)
Graduate studies (MSc/PhD)	4 (16.67)

** This included students enrolled in the medicine, family medicine, and medical preparatory programs.*

> *Previously, I thought that the presence of practitioners from high-income countries is vital. However, I learnt that local practitioners have a better understanding of local diseases and their treatment. There shouldn't be any systems of supremacy present because both the low/middle-income country healthcare professionals and the high-income country health care professionals have their expertise to bring to the table. (Student 2)*

Furthermore, the students stated that the course allowed them to think about colonialism as a structural determinant of health and recognize its health impacts on marginalized groups such as BIPOC (Black, Indigenous, and other People(s) of Colour), and LGBTQ+ (Lesbian, Gay, Bisexual, Transgender, Queer +) communities. Students also recognized the direct health impacts (e.g.,

racial stressors or intergenerational trauma) and health inequalities these groups face due to colonialism.

> *Through this course I learned that the health inequities that we see today within Black and Indigenous communities stem from decades of slavery and sidelining that have kept those communities disadvantaged. (Student 3)*

In summary, students expressed that the course fostered reflection on the interwoven patterns of colonialism in global health and its impact on marginalized populations and the Global South. They noted that the lectures challenged the assumptions of current global health policies and programs, particularly their potential to achieve health equity for all.

> *[…] options that are offered to us (healthcare professionals or students) as global health opportunities (e.g. humanitarian aid trips and volunteerism) are not necessarily the best way to make a real change towards justice and equality. (Student 16)*

The course helped students understand global health decolonization and informed future planned actions towards decolonization

The course deepened the students' understanding of global health decolonization, which they perceived as a range of multi-agency actions that aim to dismantle the interwoven colonial patterns in global health systems, structures, and programs. Having the WHO's "Framework for tackling social determinants of health inequities" in mind, we organized students' perspectives regarding global health decolonization on four overlapping levels (see Figure 1): micro level (healthcare professionals' direct actions); meso level (healthcare professionals' community actions); macro level (actions aimed at changing the sociopolitical structures and healthcare systems); and global level (actions aimed at changing the global health structures and programs).

Most actions identified by students on the first two levels referred to the roles and responsibilities of healthcare professionals. On the next two levels, however, they shifted their focus towards other stakeholders. They held the local and societal leaders, healthcare educational bodies, and proximal global health units accountable for large-scale actions and structural changes.

1. Micro level (healthcare professionals' direct actions)

The micro level represents the direct actions that healthcare professionals engage in for decolonizing their worldview and healthcare practice. On this level, students indicated that practitioners should self-reflect and identify their privileges and biases, which can foster humility and motivate them to act in solidarity with people from marginalized and diverse groups. It also enables practitioners to identify and address the potential power

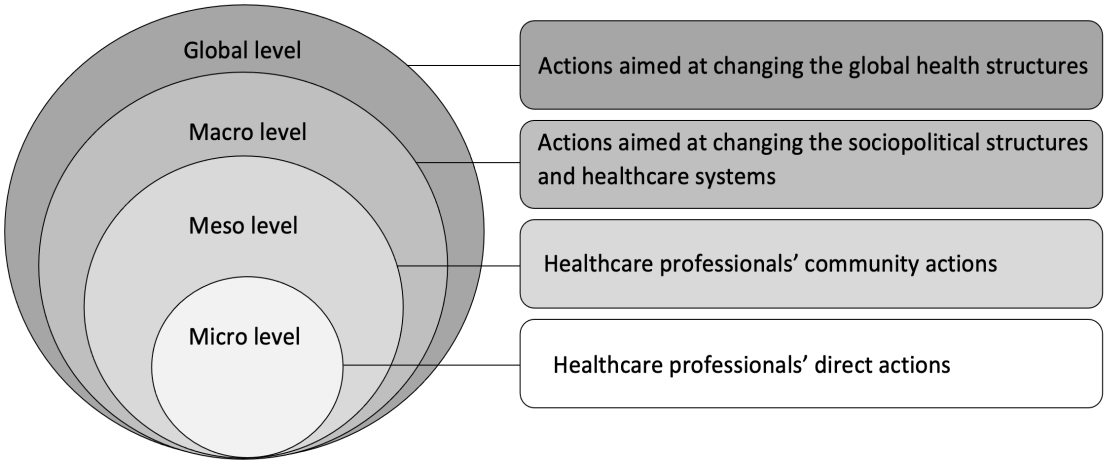

Figure 1. Students' perspectives regarding global health decolonization.

imbalances that might affect their therapeutic alliance with patients.

> *Following these lectures that have opened my eyes to many issues, I will keep growing my awareness of these problems as to deconstruct any biases I might have and to advocate for those I care for in my future nursing practice. (Student 4)*

Students identified that practitioners should provide patient-centered care by understanding the patient's social determinants of health and how colonialism might have directly or indirectly impacted them. Items mentioned included learning about the impact of colonialism on marginalized and minority groups to avoid victim blaming. Students indicated that practitioners should foster an empathetic and culturally safe environment and engage patients in shared decision-making.

2. Meso level (healthcare professionals' community actions)

On this level, students indicated that practitioners should first learn about the communities in which they practice, which includes understanding their cultures and knowledge systems while also understanding how these communities perceive concepts such as illness, health, and treatment. Students believed this would enable practitioners to better identify the community's unique needs and expectations. It would also allow practitioners to decenter their practice from Western to local and provide community-based care.

> *Quality healthcare looks different from place to place, depending on the people, cultures, languages, values, etc. Ensuring that all who need it can receive quality healthcare affordably, and in a way that respects their beliefs, cultures, and choices, is part of decolonization. (Student 9)*

Furthermore, students suggested that practitioners should identify and fight against the discriminatory patterns in their own communities. For instance, practitioners could collaborate with community leaders and organizations that promote equity and diversity and that support minority and marginalized groups. Students believed that this would provide a space for mutual exchange of knowledge amongst practitioners and community representatives; here, practitioners could voice their patients' healthcare needs and advocate for including their perspectives in local plans. While this point was raised by multiple students, it was interesting to note that colonial patterns still at times tinted actions students envisioned would increase the involvement of local healthcare practitioners.

> *I would like to see more opportunities for marginalized and vulnerable groups to become involved in global health... We require these individuals to bring back the knowledge to their communities, rather than constantly having outsiders "colonize", and speak on their behalf. (Student 5)*

3. Macro level (actions aimed at changing the sociopolitical structures and healthcare systems)

The macro level represents the actions that one must take to decolonize health at a societal level, including within sociopolitical structures and healthcare systems. While some students explicitly referred to the roles and responsibilities of healthcare practitioners at this level, others highlighted the required actions without explicitly attributing the responsibility to a certain agency (healthcare professionals, community leaders, healthcare educational bodies, global health units, etc.).

On this level, students suggested that practitioners should understand and navigate the ways in which colonialism has shaped the socioeconomic structures and dominated policy-making processes, namely a lack of diversity among the key decision-makers, constantly favoring certain groups and populations over others, and discriminatory resource distribution. According to students, practitioners should also advocate for social and political changes geared towards decolonization, as this would positively affect communities' social determinants of health and contribute to better healthcare access.

> *To me, decolonizing global health means to eradicate hegemonic power within health structures, and any other societal structure that may influence health such as social, political, judicial, and even religious structures. (Student 16)*

Furthermore, students felt that practitioners should learn about colonial patterns that have historically shaped, and still dominate, the healthcare system, and advocate for inclusive health policies and practices. For instance, many referred to structural racism and sexism in healthcare centers, which manifests as discriminatory behaviors towards marginalized and minority groups. Students explained that such patterns could discourage these individuals from seeking help or result in the dismissal of their signs and symptoms as "pretentious" or "attention seeking". They also highlighted that governments and healthcare units have a duty to systemically address these issues.

Students believed that practitioners should also reflect on their healthcare education and practice and engage in improvement where necessary. One participant argued that medical education does not equip students with the necessary knowledge and skills for treating People(s) of Colour as most guidelines regarding skin conditions are designed to assess and evaluate light-colored skin, while little to no information is provided on assessing skin conditions in People(s) of Colour.

> *Teaching material may unconsciously perpetuate colonialist education. For example, medical manuals may focus on White patients and omit important information about non-White individuals..., many research papers fail to incorporate minorities or marginalized communities into their work, reinforcing colonial practices. As science shapes the future of academia, it is essential to make it inclusive rather than exclusive. (Student 17)*

According to the participants, healthcare practitioners should address this by advocating for changes in the medical curriculum. Students also felt that healthcare educational bodies have a duty to move towards more inclusive curricula and invite more students from marginalized and minority groups to pursue healthcare professions. Students mentioned one way to do this was to create a safer and more inclusive educational environment for these students.

> *As one of the students sitting on the McGill Medicine admissions board, I want to continue to contribute and work on the amazing initiative started by my fellow peers, which is to include a Black students' admissions pathway. This will hopefully lead to more Black physicians in Canada, that can then advocate on behalf of their community in practice, rather than others who have not lived this experience... (Student 24)*

4. Global level (actions aimed at changing the global health structures and programs)

The global level represents the decolonization actions that must be taken on an international level. Similar to the macro level, students elaborated on the actions needed for change but did not always specify which individuals or agencies should be held accountable for them.

On this level, students perceived that practitioners should learn about the impacts of colonialism in shaping global health structures, policies, and programs. For instance, they should learn about the key concepts that favor and maintain colonialism as well as "colonialism indicators" in the proximal global health units, as discussed before. Students indicated that gaining such insight would eventually motivate practitioners to advocate for dismantling colonial structures and developing inclusive policies and programs. Students elaborated that while these learnings could partly occur through self-directed learning, healthcare schools have a duty to address the existing curriculum gap in this regard.

> *This course has showed me that the first step in decolonizing global health is recognizing the implications of the structural legacies of colonialism. The awareness of the impact these have on inequalities can help encourage*

> *discourse on colonialism as to be able to decolonize practices in health. (Student 12)*

Furthermore, students highlighted that proximal global health units should reconsider and even reform their plans and programs. They explained that these health units should abolish any colonial structures that prevent equitable distribution of resources and the unequal favoring of certain populations/countries over others. According to the students, these proximal health units should also invite people from marginalized groups to be part of their decision-making committees and let the knowledge and expertise of each community/country lead the healthcare programs related to that region. Students particularly highlighted the need to reconsider programs that, intentionally or not, impose Eurocentric healthcare services on the Global South and are based on concepts such as "white saviorism", namely some humanitarian aid missions.

> *Women of the global south must be the leaders of this movement. It is only when those that are affected most by global health inequities are at the forefront of leadership that decolonization can actually occur. (Student 4)*

Discussion

In recent years, universities have increased the opportunities available to students to train in global health; however, very few offer a specific focus on decolonization. Many tend to focus on other ethical aspects such as the maintenance of long-term partnerships, the safety of practitioners, and conflict management, but never broach the concept of colonization and its importance in global health education (30, 31). Many others have advocated for the need to move further and include teaching about the history of colonial medicine and other aspects needed to encourage decolonizing global health (32, 33). Our findings show that McGill's IPGHC 2021 addressed this issue by raising the students' awareness of colonization in healthcare and sensitizing them to the impacts of colonialism on local and global healthcare structures, programs, and education. It also empowered students to envision health decolonization and relevant actions for abolishing colonial practices integrated into health. These learnings are in line with what several global health decolonization activists have advocated for in the literature (13, 34-37).

Unique insights on global health decolonization were identified through our study. Students expressed the importance of a range of multi-agency actions that aim to dismantle the interwoven colonial patterns in global health systems, structures, and programs. We found that the actions being identified could not be separated from the concept of decolonization itself. However, we also found that colonialist patterns are so deeply embedded in the thought process surrounding the delivery of global healthcare that certain actions students posited as decolonizing still maintained colonizing power dynamics. Inspired by the WHO's "Framework for tackling social determinants of health inequities" (25), our findings illustrate a similar framework for decolonizing global health on the micro, meso, macro, and global levels. We found this to be a useful framework to organize the different approaches to global health decolonization.

Furthermore, our findings reveal that the healthcare students in our study tend to recognize their professional responsibilities towards health decolonization on the micro and meso level, including interactions with patients and community actions. However, they seem less certain about the macro and global levels and might shift the locus of responsibility towards other agencies such as educational systems, governments, and global health units. This is not surprising since there is debate in the literature about where clinicians' social duties end and what can be expected from them in terms of public engagement (38, 39). However, recent emphasis on the structural, political, and commercial determinants of health might serve to expand the pathways to action to address decolonization of global health education. Educators can make concerted efforts to articulate the associations between colonial patterns and existing structural forms of governance that perpetuate disadvantages for certain regions and peoples. Scholars continue to make these associations (40, 41) and this literature will serve to expand the scope of consideration

and action fostered in global health education.

Indeed, although the professional bodies of global health have a duty to address decolonization, there is general agreement on the relevance of engaging healthcare professionals in the process (42-44). As various authors have suggested (45, 46), healthcare professionals should identify colonialism among distal determinants of health, which are defined as "the causes of causes for unjust life situations for certain groups or people over others" (3 p.1).

A decolonizing approach to health professions education can prepare students to identify and dismantle colonial legacies interwoven in the healthcare systems. We believe that the importance of addressing decolonization at various points in healthcare curriculum lies in the demonstration that a single instance (such as our course) is not sufficient to begin to reimagine and reconstruct global health education. Innovative, engaging pedagogies such as "transformative learning approaches" (47) that allow students to become "critically conscious" about this topic through reflecting on their assumptions about colonial legacies in healthcare, analyzing the ways that these legacies influence health, and imagining actions for dismantling them can be interwoven in curricula.

Limitations

One of the limitations of this study was that the constraints of designing a data collection tool that fit within strict course requirements. Therefore, the assignment's format did not allow for much depth and breadth in answers as the word limit (800 words) reduced the students' ability to elaborate on their dissertations. Regardless, the questions' open-ended nature and the high number of participants (48) allowed for appropriate data collection. A second limitation is that our findings are not necessarily generalizable as the research has been done in the specific setting of the McGill IPGHC. However, they can be translated to different contexts depending on their degree of similarity with our setting (22).

Conclusion

This study showed that a university interprofessional global health course with a focus on decolonization helped raise awareness among students in health-related fields about the impacts of colonialism on current healthcare systems. The course also enabled students to describe and identify actions required for global health decolonization at the micro and meso levels as well as attribute actions to global health actors. However, students had more difficulty identifying institutions or resources to act on the macro and global level.

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Data availability statement: The data that support the findings of this study are not openly available due to ethical considerations aligning with the instructions of the McGill Faculty of Medicine's Institutional Review Board. However, multiple anonymized data segments have been added to the manuscript (see quotations in the findings section).

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