BIOSOCIAL ANALYSIS OF MIGRATION AND HEALTH IN MEXICO, LAC AND BEYOND: EXPLORING THE RIGHT TO HEALTH FOR PEOPLE ON THE MOVE BEFORE, DURING AND BEYOND THE COVID-19 PANDEMIC

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Abstract

Introduction: If people have been on the move for over 200,000 years, why is it that migrant's access to healthcare continues to be a challenge? Despite global commitments to 'leaving no one behind', governments and institutions continue to neglect the explicit inclusion of all migrants in healthcare systems and policies. Rather than chartering international commitments towards safe and orderly migration, many countries' policies disrupt, fragment and jeopardize the right to health for migrants on the move, even during the ongoing global COVID-19 pandemic. This paper explores the syndemic and structural vulnerability of people on the move, emphasizing the structural, political, economic and social forces, both historical and emerging, that impact an individual's decision to migrate, his or her health and the barriers to fulfil their right to health.

Methods: The present work introduces a series of case studies illustrating the many experiences faced by migrants when accessing TB care during the COVID-19 pandemic. The cases (some of them already published in the International Journal for Infectious Diseases) explore the right to access TB care for a circular Central American migrant in Mexico, internally displaced persons in Syria, impoverished Venezuelans in Peru, and labour migrants in South Africa.

Results: Leveraging from teachings within the disciplines of global health and social medicine, human rights and migration, and international law enabled a deeper understanding of evidence-

based and comprehensive healthcare delivery strategies for people on the move. Likewise, exploring the retroactive impact of COVID-19 on global TB strategies towards people on the move enabled a deeper syndemic and biosocial analysis merged within human rights frameworks. The work underlined the commonly overlooked barriers migrants experience when attempting to fulfil their right to health around the globe.

Discussion:

Migrant health is a dynamic and multidimensional experience that requires a complete understanding of the host, transit and origin context of healthcare systems and delivery. The accumulation of negative or positive health-seeking experiences is reshaped by the interaction between the individual and the local or national health governance. While this thesis highlighted and addressed the many limitations to assessing access to healthcare for people on the move; exploring areas of opportunity to improve service delivery mainly was limited to the supply side with scarce detail on the system's overall user experience and interaction. By building from international legal frameworks (such as the AAAQ Framework described within the General Comment No. 14) and migrant and people-centered healthcare delivery. This work brought forward a revised approach for program and policy evaluation. The conceptual framework has been proposed to render opportunities for practical, human-rights and people-centered approaches to comprehensive healthcare delivery for accountability to ensure no one is left behind.

Table of Contents

Figures

Tables

Boxes

Appendices

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Part 1: Biosocial Analysis of Migration and Health in Mexico and LAC: Addressing challenges in TB care for migrant populations on the move

We hear you have been taken sick with tuberculosis. We entreat you: see this not as a turn of fate, but as an arrack by the oppressors, who exposed you, poorly clothed and in damp housing, to hunger. That is how you were made sick.

We charge you take up the struggle at once against sickness and against oppression with all possible cunning, rigor and tenacity as part of our great struggle, which has to be waged from a position of weakness, in utter misery; and in which everything is permitted which will aid our victory, a victory which is the victory of humanity over the scum of the earth. We await your return as soon as possible to your post, comrade.

"Call to a sick Communist" Bertold Brecht, 1937

(Translation provided by Dr. Michael Knipper)

1. Introduction to Migration Health

Despite the long history of human mobility (which can be traced back to 200,000 years before the notion of passports), people's health and healthcare access while on the move remain a challenge (Bhabha, 2018a; Manning, 2013). For irregular migrants (see appendix A) for IOM glossary on migration terms), health and access to healthcare are limited, on one side, by migration policies not considering the health of those on the move, and on the other, by health policies that fail to explicitly consider migrants' health needs (Vearey et al., 2019). Health systems and policies are usually designed under the assumption (either by intention or omission) that all health services users are either citizens, residents, or visa holders. Likewise, the international legal frameworks for healthcare neither formally nor explicitly mention people on the move until 2018 (Onarheim & Rached, 2020; Vearey et al., 2019), limiting their scoping view to refugees (*Global Compact on Refugees*, 2018).

Still, there is an important relationship between migration and health: migration itself is often the result of social determinants that diminish health statuses, such as poverty, unemployment, and violence. Likewise, the migration journey often carries multiple health risks, from accidents to infectious diseases to further experiences of impoverishment and violence (Abubakar et al., 2018a; Bhabha & Abel, 2019; Bojorquez et al., 2021; Kumar & Diaz, 2019). Because of the strong influence of social determinants on both the migration journey and the health of migrant people (H. Castañeda et al., 2015; Kumar & Diaz, 2019; Willen et al., 2017), to truly capture the scope of such relationship it should be looked at through a biosocial lens: considering the series of mutually re-enforcing events that trigger a cascade of health outcomes (Levesque et al., 2013; Mukherjee, 2018b; Willen et al., 2017). In short, for the world—researchers, lawyers, health professionals, and ultimately policy-makers—to fully address migrant's health, there must be a merging of biomedical understanding of migrant health with the biosocial knowledge of the root causes for both ill-health and migration (Farmer, 2004; Knipper, 2016; Vearey et al., 2019). Likewise, it is essential to recognize that, to address the root causes for migrant suffering and ill health, a "one-size-fits-all" strategy will not succeed at considering the multidimensional and dynamic experiences of accessing healthcare for people on the move, nor will it succeed at addressing their multiple barriers to healthcare. Instead, the best approach is one informed by migrants themselves and implemented using core legal instruments that ensure the protection and fulfillment of the human right to health *for all* (Abubakar et al., 2018b; Levesque et al., 2013).

Amid a global pandemic, healthcare, and prevention of avoidable harm and suffering — regardless of nationality or eligibility criteria—remains a luxury that only a few have access to (Martinez-Juarez et al., 2020). More than ever, we must stop and question if the "human right to health" is –in practice – only guaranteed for some, such as passport or documentation holders.

Over the past few years, research has shown that migration can be associated with an improvement in health status while also conferring increased exposure to health risks (Abubakar et al., 2018b; B. Kumar, 2011; *World Migration Report 2020*, 2019; Mcauliffe & Ruhs, 2017; World Health Assembly, 2019). Whether the process of migration itself improves or diminishes an individual's health depends on the conditions of the origin country, cumulative exposure to internal, previous health-seeking experiences and external confounders, the health risks encountered throughout their transit, as well as the living, working, and environmental conditions within the transit or host country (Aldridge et al., 2018; Bojorquez et al., 2021; Bojorquez-Chapela et al., 2020; Kumar & Diaz, 2019; Willen et al., 2017). These conditions are mostly structural, political, economic, and social in nature (H. Castañeda et al., 2015; Holmes, 2013; Quesada et al., 2011). They are structured by agreements between groups of individuals in power and institutionalized through international, national, local, and municipal state institutions/organizations (Anter, 2020). These, in turn, determine the health and access to services for migrant people – known as the governance of migration and health (Vearey et al., 2019; Kolitha Wickramage & Annunziata, 2018).

When structural conditions harm people, structural violence is said to have occurred. The current vulnerability that places migrants at higher risk of harm, illness, and death is socially constructed and influenced by institutional, governmental, and political agreements experienced in everyday life. Structural violence—a term first mentioned by Jonathan Galtung—describes ways in which invisible forces built within institutions, governments, and organizations define social norms and manifest in "unequal power and consequently as unequal life chances" (Farmer et al., 2006; Galtung, 1969, p. 17). Furthermore, Medical Anthropologist and Social Justice advocate Dr. Paul Farmer elaborates on Galtung's notion and explains structural violence as "the

social agreements that place some individuals or groups at risk. These agreements are structural because they are embedded in our social world's political and economic organization and institutions. They are violent because they cause harm to people" (Farmer et al., 2006, p. 1).

For people on the move, such as migrants, refugees, and asylum seekers, structural violence has a dynamic and additive effect throughout their migration journey. Accumulated risk of physical, emotional, or social exposures throughout an individual's life-course plays a crucial role in triggering negative health outcomes—often overlooked in medical practice (Holmes, 2013; Kumar & Diaz, 2019). The above-mentioned accumulated exposures are multilayered and dynamic, affecting each person individually or collectively (B. N. Kumar & Diaz, 2019). The first layer could be attributed to exposure before their migration journey is set in motion (Zimmerman et al., 2011). One example could be the political and economic systems in origin countries that drive high levels of poverty, unemployment, discrimination, and violence (i.e., gang-based, organized crime, gender-based violence) and hamper social and health services reach. This directly affects health status and health-seeking experiences (Abubakar et al., 2018a; Bhabha, 2018c; *World Migration Report 2020*, 2019). Likewise, health-seeking experiences, such as a) high out-of-pocket expenditure; b) lack of resolutive care; c) discrimination and mistreatment from healthcare workers; d) dearth of functioning health centers and e) historic investment in health promotion at the expense of treatment, diminishes people's trust and confidence in ever failing health systems and further hinders access to health care (H. Castañeda et al., 2015; Morris & Zunia, 2019).

On a second layer, migrant people are exposed to structural violence while in movement through: a) stringent and punitive migration policies that focus on deterring through policing and militarization, b) discriminatory discourses and practices against migrants, and c) health policies

that limit access to services to those who hold a legal immigration status (Bhabha, 2018b). These socially constructed arrangements heartlessly expose migrants to harm. Such damage heightens the risk to police brutality, organized crime, violence, physical and sexual exploitation, as well as hazardous journeys through unsafe means of transportation (i.e., walking long distances, clinging to cargo trains, freezer trucks or water pipes without ventilation, hand-crafted boats) (Bhabha et al., 2020; Leyva-Flores et al., 2019; Medicos Sin Fronteras, 2020). Moreover, the dangers of traveling undocumented limit individual's access to trusted networks of health, social and legal services such as in underfunded migrant shelters (H. Castañeda et al., 2015; Sedas et al., 2020; Stoesslé et al., 2015), forcing migrants to either seek care in lower-quality locations or to not seek care at all.

One example of the unintended consequences of draconian anti-migration policies on the health and livelihoods of migrants on the move could be the 2016-2020 modifications to binational and regional migration policies between LACs and the United States of America (U.S.). Policies intentionally aimed at deterring migration might only prolong the exposure to health and social risks throughout their migration journey with limited infrastructure and capacity to address migrant's health and social needs (Human Rights Watch, 2021; Riggirozzi et al., 2020; Sedas et al., 2020). Moreover, these policies, rather than enabling governments commitments on Safe and Orderly Migration, disrupt, fragment, and jeopardize the right to health for migrants on the move (Bhabha, 2018b). These additive layers of structural violence make migrant people vulnerable to a progressive worsening of their health status and an increased risk for illness and death compared to people in the origin or host country—a term known as structural vulnerability. Philippe Bourgois describe structural vulnerability as a product of an individual's interface with class-based economic exploitation and cultural, gender/sexual, and racialized discrimination (Bourgois &

Hart, 2011, p. 2). Structural violence and structural vulnerability provide an understanding of how the system's oppression over a migrant individual's agency and their choice ultimately impacts their health-seeking experience and pathway to care (Quesada et al., 2011). Working towards addressing the upstream structural political, economic, and social factors (Willen et al., 2017)—commonly called the social determinants of health—that hinder a migrant person's "fulfillment of their highest attainable standard of health and well-being" (*International Covenant on Economic, Social and Cultural Rights*, 1966) is the overall goal of the growing discipline of Migration and Health (Knipper, 2016; Knipper et al., 2021).

Initial theories on migrant health brought forward by McBeth, Shetty, and Cruishank, and Beevers (1984 and 1989, respectively) attempted to understand differences in migrant health outcomes compared to those of the host community. These differences have been commonly attributed to race/ethnicity, culture, or biomedical factors. However, legal immigration status, as well as the structural, political, and economic forces that disproportionately affect migrant's health before, during, and after their migration journey, are seldom considered (Aldridge et al., 2018; Kumar & Diaz, 2019). The ultimate consequence of these "immodest claims of causality" (Farmer, 1997) is unnecessary social suffering. Immodestly claiming ill health or causality is to attribute the differences in health outcomes observed in migrant populations to an individual's biomedical or cultural characteristics is to displace the governments' responsibility to address the political, economic, and historic factors of migration and health (Farmer, 1999, 2005). Moreover, this approach ignores the fact that social, ethnic, and racial categorization of people, reinforced by the passport system and the quota entry system, cause more social and health inequalities (Holmes, 2013).

Besides conferring health risks, migration can also be a determinant for improving health outcomes (Abubakar et al., 2018; Castañeda et al., 2015). Migrating might permit an improvement of the very structural conditions that keep someone sick or in danger, such as dire poverty, war, or natural disasters (Abubakar et al., 2018; *World Migration Report 2020*, 2019); moreover, preconditioned migration as a result of climate change and the need for survival (Suárez-Orozco, 2019b). Likewise, it might be important to revisit the "healthy migrant effect"—the observation that in some places, migrant populations are healthier than host populations, which is usually attributed to the young age and health profile of individuals who decide to migrate as well as "healthier migrants might be more likely to choose to migrate, benefit from decisions to migrate, or successfully migrate" (Aldridge et al., 2018, p. 2562)—as well as the "salmon effect"—which suggests that migrants who fall ill while in transit or after years of resettlement prefer to make their journey back home to die in the company of their loved ones (Abubakar et al., 2018b; Kumar, 2011). However, important overestimation or underestimation could likely shift the "healthy migrant" hypothesis away or towards the null, depending on the quality of data collected (Aldridge et al., 2018). While such assumptions of migrant's health might have characterized historic migration sceneries, contemporary shifts in migration mobility and demographics (Mcauliffe & Khadria, 2019) might depict a divergent reality. Since 2018, it has become more common to see the feminization of migration (Suárez-Orozco, 2019a) accompanied by children, spouses, and the elderly (Mcauliffe & Khadria, 2019), as well as individuals with underlying chronic health conditions such as diabetes, heart disease, cancer, asthma, mental illness, HIV/AIDS, and TB (Leyva-Flores et al., 2019; Mcauliffe & Khadria, 2019), conditions that might worsen and get complicated.

1.1 Biosocial syndemics and syndemic vulnerability for people on the move

A syndemic happens when two or more health conditions coexist in a population in which the interaction of social conditions (such as poverty, discrimination, chronic stress, and structural violence) contribute to illness or disease progression (Singer et al., 2017). In the case of migrant populations, examples of frequent syndemics include malnutrition and tuberculosis (Dhavan et al., 2017), type two diabetes and depression (Morris & Zunia, 2019), alcohol abuse, and psychological trauma (Médecins Sans Frontières (MSF), 2020) among others. As expressed by Richard Horton, Editor in Chief for The Lancet journal, syndemics are "characterized by biological and social interactions between conditions and states, interactions that increase a person's susceptibility to harm or worsen their health outcomes" (Horton, 2020, p. 874).

For Central American and transcontinental migrants heading northwards through Mexico, this syndemic scenario has rarely been considered (Gallégos, 2020), even in the light of the COVID-19 pandemic (Bojorquez et al., 2021; Rene Leyva-Flores et al., 2015; Sedas et al., 2020). Despite the dramatic shift in demographics and burden of disease of those who head northwards through Mexico, public health efforts continue to focus on minimal standards provision (i.e., temperature recordings, ensuring the provision of water, soap and hygiene products, facemasks, pain medication (Médecins Sans Frontières, 2020) aimed at maintaining ´cost-effectiveness´ of national public health programs (*Plan Integral de Atención a La Salud de La Población Migrante*, 2019; Secretaria de Salud, 2020). However, this approach fails to consider the full scope of migrant's health needs (Human Rights Watch, 2021; *World Migration Report: 2000*, 2000; Médecins Sans Frontières, 2020), as well as the social, structural, and institutional conditions that impact illness, death and long-term costs of avoidable disease and suffering (Ramírez, 2020; Rodríguez, 2019; Willen et al., 2017, p. 965). The vulnerability for developing one or multiple diseases by the conditions in which migrants live, travel, or work, and the vulnerability of not

having access to care, are two complementary viewpoints for addressing migrants' health. Sarah Willen, Michael Knipper, and colleagues coined the term "syndemic vulnerability" to describe how the overlapping burden of disease in migrant populations is mutually inclusive and attributed to "environments of aggravated adversity and interact synergistically to yield worse health outcomes than each affliction would likely generate on its own" (Willen et al., 2017, p. 965). By observing migrant's health through the syndemic lens, it is possible to "investigate synergistic, often deleterious interactions among comorbid health conditions, especially under circumstances of structural and political adversity," such as the current COVID-19 pandemic and growing anti-migrant sentiment (Willen et al., 2017, p. 964).

The syndemic vulnerability of migrants can be further exacerbated by public health policies that focus national and local efforts on addressing the health needs of *citizens*, limiting access to healthcare based on immigration status. This form of geopolitical and nationalistic control over the health of individuals and the ultimate impact on the lives of those on the move has been described by Quesada and colleagues as structural vulnerability (Quesada et al., 2011). Structural and syndemic vulnerability is the ultimate ticking bomb for unnecessary and preventable illness and death for migrant populations (Quesada et al., 2011). To this point, COVID-19 is not only a pandemic but also a multi-layered syndemic that has an impact on health outcomes for multiple diseases by direct interaction (as with type two diabetes) or indirect interaction (further hindering access to health care for chronic or acute health conditions such as tuberculosis). The government's failure to treat it as such increases the risk of millions of people living with chronic infectious and non-infectious diseases as well as those with acute health needs (Horton, 2020; Martinez-Juarez et al., 2020; Martínez-Juárez et al., 2020; Orcutt, 2021) is reflected on the world's response to COVID-19. The hyper-focused response on cutting transmission and mortality through the

verticalization of the health systems services has caused an increase in morbidity and mortality from type 2 diabetes mellitus, cancer, tuberculosis, and mental health (Cilloni et al., 2020; Horton, 2020; Kluge et al., 2020, p. 19; Orcutt, 2021; Sedas et al., 2020).

Of all types of international documented and undocumented migrants—seasonal, circular, labour, return, internally displaced, environmental– irregular migrants are amongst the most vulnerable to experiencing prolonged periods with lack of resolutive healthcare (Pierola & Rodríguez Chatruc, 2020) (see appendix A for detailed definitions). Those living or traveling undocumented accumulate negative experiences before, during, and after their migration journey are more likely to reach a tipping point towards negative health outcomes (Zimmerman et al., 2011). In addition, their lack of recognition in government health and social protection schemes generally increases their overall morbidity and mortality compared to host or transiting communities (Kumar & Diaz, 2019). This is particularly true for those transiting or resettling in countries that fail to explicitly mention and/or integrate these groups into their health policies, systems, or insurance plans.

Living undocumented and not recognized by States' policies limits their ability to access healthcare, increasing out-of-pocket expenditure, which contributes to further impoverishment and worsening living conditions (Vearey et al., 2019). In addition, the anti-migrant sentiment fosters distrust amongst individuals, making it less likely for them to reach out or attempt accessing the already limited healthcare they might be able to receive or have received in their host countries (H. Castañeda et al., 2015; Pant et al., 2019). Published research highlights the effects of multidirectional forms of racism, discrimination, and stigma on overall health outcomes of migrants (Abubakar et al., 2018a; B. N. Kumar & Diaz, 2019; Szaflarski & Bauldry, 2019). Accumulated and frequently shared experiences interacting with government, immigration, and

health authorities, as well as institutions and organizations, generate either positive or negative health-seeking experiences (H. Castañeda et al., 2015). In turn, these experiences, when paired with direct or indirect forms of discrimination, racism, and stigma, reshape a migrant individual's health-seeking behaviors (H. Castañeda et al., 2015; Kumar & Diaz, 2019). The consequence of these has a profound effect on the physical and mental health of migrants in transit or resettling countries (Szaflarski & Bauldry, 2019). The negative experience may lead to underutilization of health services, poor quality of service delivered/received, long waiting times, and limited availability/accessibility (Kumar & Diaz, 2019).

This is especially true in the face of a public health emergency of international concern (PHEIC); this happened with Influenza preparedness and response plans. Wickramage, Gostin, and colleagues conducted a study to understand the extent of migrant inclusion in national preparedness and response plans for low-and-middle countries within the Asia-Pacific region. Out of twenty-one countries randomly selected, only three included measures to counter stigma and discrimination, while eighteen included biosecurity measures at their borders (Wickramage et al., 2018). To this day, most migrants, asylum seekers, and refugees remain outside of governments' preparedness, response, and recovery plans. On April 14, 2021, a group of high-level speakers convened by colleagues from Lancet Migration Latin America, Institute for Global Health Barcelona, and PAHO/WHO discussed critical steps to "build back better" by explicitly including migrants, asylum seekers, and refugees in LAC governments response. The event's keynote speaker UN High Commissioner for Human Rights, Dr. Michelle Bachelet's opening remarks included grave concern over the degree to which migrants are excluded from public health policies in LAC. Madame Bachelet expressed how the COVID-19 pandemic disproportionately affects those marginalized and discriminated against–explicitly mentioning migrants as a result of

exclusion from laws, policies, and practices towards the access to rights, even within the context of COVID-19 (UN High Commissioner for Human Rights, Michelle Bachelet, 2021). The High Commissioner's words amplified the more than 30,000 migrant voices from 159 countries who participated in the 2020 WHO AparTogether survey (World Health Organization, 2020c). Amongst all participants, irregular migrants reported exacerbated perceived discrimination compared to months/years before the pandemic: 16% expressed unfair treatment from enforcement, 23% perceived people being more anxious around them, 27% expressed avoidance from non-migrants, 17% were called names, 22% reported being treated differently because of where they were from (World Health Organization, 2020c).

The situation experienced by thousands of Central American migrants traveling through Mexico is an excellent representation of the broader socioeconomic, cultural, political, and unjust disparities occurring globally against and towards migrants (Sedas et al., 2020). For the purpose of this work, Mexico was chosen for an in-depth examination and analysis, as it typifies and exemplifies similar historical, political, economic, and social forces in LAC that impact the lives and health of many families and individuals on the move. Albeit Mexico carrying a similar past concerning the development of their health, public (Atun et al., 2015), and immigration policies compared to other LAC contexts, it will be critical to acknowledge the rich array of culture, diversity, and contextualization between and throughout LAC countries and regions (Bojorquez et al., 2021; Ceriani Cernadas, 2019; Gonzalez Block et al., 2020; González-Block, 1990).

As for this thesis, the present work will illustrate through several case studies already published in the International Journal of Infectious Diseases the many challenges—economic, logistical, social, political—that migrants experience when attempting to access Tuberculosis (TB) care in the midst of COVID-19 pandemic. TB is an interesting disease to assess the impediments

people on the move face because it is one disease that treatment is free from all governments and considered a public good. Therefore, if even TB diagnosis and treatment is difficult, it impugns the public system. Additionally, TB, as mentioned in the Berthold Brecht quote at the outset of this work, is a disease of material impoverishment and thus a signal disease for structural violence. The following work will look at several cases presented in this writing from a syndemic and structural vulnerability perspective. The first case –the case of Abelino– compiles the experience of a rural living circular irregular migrants from Guatemala, while the remaining three cases from Syria, Peru, and South Africa – published in the International Journal of Infectious Diseases on March 25, 2021 (Knipper et al., 2021). The work will then integrate a proposed instrument to evaluate the multidimensional and dynamic experience of access to healthcare adapted from human-rights-based instruments. All four cases will describe barriers and facilitators faced by people on the move (circular/economic migration, violence, conflict, and poverty-induced migration). This work highlights key structural, institutional, and legal gaps in healthcare delivery for migrants as well as illustrates the dynamic and multidimensional experience of access. It is also important to note that the context of migration will inventively challenge the current health-delivery models for TB—before, during, and beyond COVID-19—despite TB care being widely available and free as per recently ratified global commitments (Reid et al., 2020).

According to the most recent report published by Stop TB Partnership, the arrival of COVID-19 forced a catastrophic twelve-year setback in the fight to end TB (Stop TB Partnership, 2021b). This setback was mostly associated with the health system's capacity to maintain service delivery as the workforce, diagnostic efforts, and infrastructure (mobile and in-site) turned to COVID-19 response (Wingfield et al., 2021). Researchers found, after modeling the one-year aftermath of systems verticalization and COVID-19 related national lockdowns, that TB deaths

and TB cases could dramatically increase 4-16% and 3-9% in the next five years, respectively (Cilloni et al., 2020).

Exploring the retroactive impact of COVID-19 on global TB strategies to improve diagnostic capacity and effective treatment provision (Wingfield et al., 2021) towards people on the move might shed light on the many overlooked barriers to healthcare. If TB services are not properly functioning for migrant individuals, what can we expect from other services that are even more limited and attract insufficient funding? The syndemic analysis of TB treatment, diagnosis, and care for people on the move will not only capture the complex and dynamic experience of accessing and delivering care for people on the move but will also be enabled for us to pinpoint the intended or unintended consequences of the inability to access healthcare throughout and across their migration journey.

It is also important to note that TB incidence, successful treatment, and good outcomes are directly associated with several key historic and contemporary geopolitical, economic, and structural factors (Farmer et al., 2013; Mukherjee, 2018a). The latter makes TB an excellent example for exploring the syndemic vulnerability during a public health emergency of international concern (PHEIC). The ultimate goal of this thesis is to leverage from teachings within the disciplines of global health and social medicine, human rights and migration, as well as international law to render opportunities for effective, evidence-based, and comprehensive healthcare delivery strategies and accountability measures for those often left behind.

2. Abelino's pathway to care

The following case study was compiled by a combination of journalistic reporting (Compañeros en Salud, 2020, 2021) and cross-referencing information with MMSc-GHD alumni,

Dra. Martha Arrieta. The text contains a series of thematic coding in the form of footnotes. Such codes contain a brief description in accordance with adapted definitions from the Availability, Accessibility, Acceptability, and of Quality (AAAQ) framework. The AAAQ framework was proposed within General Comment No. 14 and further elaborated by WHO as key points to be considered in managing human rights-based service delivery (UN Economic and Social Council, 2000). The thematic coding will be applied to the following case study, and the information will be merged with the case of Peru, Syria, and South Africa within the final discussion.

A few months ago, Compañeros En Salud (CES), the Mexican affiliate of Partners In Health, an international NGO that provides access to quality health care for the vulnerable populations in 11 countries around the world, published the case of Don Abelino, a 32-year old seasonal migrant worker from Huehuetenango, Guatemala (Compañeros en Salud, 2020). Don Abelino had been very sick for a long time, but he "thought that it was a normal cough." His path to the proper diagnosis and treatment of TB was one of luck and accompaniment from CES. Most migrants would not receive the accompaniment nor service provision from a local NGO.

Abelino's story is familiar to many Central American migrants suffering from poverty, oppression, and chronic destitution. Abelino shared with the CES team that he and his siblings (who at some point in his life died due to substance abuse and mental illness) were raised by two young cousins following the death of both their parents as a consequence of alcoholism and postpartum complications, respectively [1].

In 2002, Abelino, at age 14, had little to no access to formal education in rural Guatemala; this was true for most children around Abelino's age. In 2002, thirty-two percent of children had not completed primary school, while 18% of people 15 to 24 years old did not know how to read

[1] Structural and institutional violence, structural vulnerability

and write (*World Bank Open Data*, 2019). The lack of opportunities forced Abelino to work informal jobs at the *haciendas* of land-owners [2]. Around 2009, Abelino, at age 20, took the risk of migrating to Mexico to find a job as a farmworker as economic struggles increased due to lack of employment[2]. Moving from Guatemala to Mexico and back, known as circular migration— a type of migration characterized by temporary or seasonally staying in a country for economic, social, or cultural purposes and returning to the origin country (Figure 1)—became part of Abelino's identity and the primary source of income for his family.

Map of Mexico and Guatemala. The region highlighted in blue represents the State of Chiapas while dotted line indicates where Jaltenango is located. The pink region representes Huehuetenango, Guatemala.

Figure 1. The geographical division between Mexico and Guatemala

While in Mexico, each winter, Abelino worked as a hired hand for less than $ 8.96 USD a day. Abelino's family depended on the remittances he was able to send each month. Over time,

[2] Push-pull factors driving migration

even circular migration became difficult as his income was not enough to afford traveling back and forth, thus in 2016, Abelino decided to stay in Chiapas, where he remained until December 2020. In a conversation with Dr. Martha Arrieta, primary care coordinator at CES, she mentioned that she and her team saw Don Abelino for the first time in June 2020—around the first peak of the COVID-19 pandemic in Mexico (Johns Hopkins University & Medicine, 2020). He had been sick for months but had received no definite diagnosis and little to no curative care. While diagnosis and treatment for TB are provided at no cost by the public health sector in Chiapas (and nationally) irrespective of nationality o immigration status, [3] in practice, Abelino had multiple barriers preventing him from reaching available, accessible, acceptable, and quality health services (AAAQ) (Pérez-Molina et al., 2020a). The inaccessibility of TB care for Abelino revolved around geographic distance to health services, insufficient income to finance traveling costs, lack of trust in the health system, lack of social networks such as family or friends, and insufficient information about his right to receive treatment from the Mexican government. Abelino had to travel for three hours or walk for eight hours to reach the nearest health clinic. A combination of previous health-seeking experiences, fear of deportation, out-of-pocket expense, and rumors influenced Abelino's distrust in the health system[4]. Dr. Arrieta described how Abelino's fear and avoidance of hospitals in Chiapas was constructed as the consequence of the high hospital mortality rates during the pandemic, which was viewed as low quality of care [5]. He said, "they said people were killed in the hospital, and I did not want to die." Yet, despite all people having access to treatment at the

[3] Physical Accessibility Clear pathway to care: even for the treatment of TB one of the few publicly available, free treatments is lacking for migrants who are unsure about the system.

[4] Acceptability: The service provided is considerate of migration experience and aims to reduce stigmatizing, dehumanizing and discouragement of seeking healthcare¨

[5] Quality Availability: Covers and addresses gaps in healthcare delivery and service provision for migrants (at least comparable with host population) - includes the creation of system of urgent medical care in case of […] epidemics and humanitarian assistance - To take measures to prevent, treat and control epidemic and endemic diseases and to provide immunization against major infectious diseases

government health center at no cost[6] Abelino, similar to many other citizens and non-citizens, suffered from long waiting times, suspended community-based active case finding activities, and limited testing capacity as human resources and funding verticalized to the COVID-19 response ("Health Must Be Recognized as the Human Right It Is," 2020). As a result, Abelino visited several private physicians who charged around $100 USD per visit, receiving ineffective antibiotic treatment without any diagnostic testing[7]. Many times, he would rely on local healers who prescribed herbal preparations. In addition, Abelino could not go back to his family in Guatemala as borders were closed to contain the spread of COVID-19.

By the time Dr. Arrieta saw Abelino in Jaltenango, Chiapas, he was renting a small room in the capital city where he had gone for a medical appointment. He was cachectic and dehydrated and knew he would die soon. Laying down preparing for death, he saw a young passerby through his window, asked for a glass of water, and fainted shortly after. Luckily, the passerby was a volunteer at Compañeros En Salud, who swiftly arranged Abelino's transport to a hospital.

Due to his respiratory symptoms and lack of testing capacity for COVID-19 and TB at the hospital, Abelino, by then highly immunocompromised due to chronic TB, was transferred to a COVID-19 ward. Dr. Arrieta, who had come to the hospital to see Don Abelino shortly after his admission, knew that "whatever it was, it can't be COVID" as he had been experiencing a chronic cough for more than six months. Dr. Arrieta personally recounts seeing him and immediately thinking that the right diagnostic tests were not available[8]. "This was TB. At that moment, using a

[6] Structural/institutional violence – syndemic and structural vulnerability

[7] Economic accessibility and quality : Provides public, private or mixed health insurance system which is affordable. Recognizes and addresses financial barriers for migrant populations and individuals are able to choose acceptable health services.

[8] Availability: Healthcare should be sufficient quantity of functioning healthcare facilities, programs and services available within reach of migrants and available for referral. Provision of healthcare is continuous – regularly available for migrants (supply). (-)

bacilloscopic test, the tool we use for diagnostic testing, was very complicated since the pandemic because it was difficult to send samples. With a chest X-Ray and high clinical suspicion, we believed that the best approach was to start him on with treatment. This helped Abelino, within three to four days working with CES to start his anti-TB medication". Dr. Arrieta recalled the many challenges many patients—especially undocumented living migrants—experience when attempting to access TB care in Mexico. This was true even before the pandemic in Chiapas, where many patients could not access diagnostic testing and treatment or are lost to follow-up due to the long traveling times to the health centers.[10] Fortunately enough for Don Abelino, he had access to TB medication that belonged to one of these patients that had been lost to follow-up (Mandavilli, 2020).

Don Abelino would not have access to TB treatment, nor it had been sustainable if CES had not provided housing and accompaniment. According to Dr. Fatima Rodriguez, Mental Health coordinator for CES, "The complexity was not only medical but social, especially the social." Dr. Rodriguez's comments reflect Abelino's challenges accessing healthcare due to his migration status, health-seeking experience, and lack of social networks in Mexico. Nevertheless, he was discharged after completing six months of treatment and was able to join his family in Guatemala when borders reopened. Thus, Abelino was an outlier because he had undiagnosed TB but because he was able to receive adequate care, which is not usually the case for Central American migrants in Mexico.

3. Brief history of migration from Central America through or to Mexico

Contextualizing migration within the broader history of Mexico and LAC is essential to understand why Abelino is an outlier compared to many migrants in Mexico. It is equally vital to understand the Mexican healthcare system and the legal frameworks that formulate the current

health system response for migrants residing, transiting, or trapped in this country before, during, and beyond the COVID-19 pandemic.

The reasons why Abelino had suffered significant delays in detection, treatment, and ensuring economic means for his family are not detached from history. European colonialisms, eugenic movements propelled by the U.S, neoliberalism and nationalism, bureaucracy, and post-cold war politics have a strong direct influence on Abelino's and other migrants' access to quality healthcare (Farmer, 1997; Farmer et al., 2013; Keshavjee et al., 2015; Mukherjee, 2018a). Therefore, the first step to disentangle the many barriers experienced by traveling and resettling Central American migrants through Mexico is to dive deep into the historical political, economic and structural context that led to contemporary forms of healthcare delivery for people on the move.

Historically, Mexico has played two important roles when it comes to migration. The first being its role as the second-largest emigration country in Latin America and the Caribbean (LAC) and second-largest in the world (*World Migration Report 2020*, 2019). Secondly, Mexico has historically functioned as the final portion of one of the largest migration routes globally, connecting LAC countries with North America. The country's reputation is mostly one of transit, rather than integration and resettlement (*World Migration Report 2020*, 2019). When it comes to migration and health specifically, having long dealt with the aftermath of structural adjustment programs (Gonzalez Block et al., 2020)—strongly influencing the development, design, and structure of the healthcare system—Mexico has mostly neglected the formation of an inclusive immigration governance agenda (Orcutt, 2021)

The history of LAC migration to North America has deep colonial and postcolonial roots. While colonization created the profound social and economic inequalities that prevail today—

perpetrated by current neoliberal policies and practices—postcolonial intervention, mostly by the United States, hindered LAC's efforts to rebuild a more just and equal society. Oscar Martinez, a Salvadoran journalist and award-winning author, extensively studied the underlying consequences of centuries of foreign-influenced and sponsored violence in Latin America. Martinez depicts in his book *A History of Violence: Living and Dying in Central America* that United States' (U.S.) interventions have—for centuries—played in violent attacks against indigenous human rights, displacing and killing thousands of people in Guatemala and other LACs. Violence has led to the mass exodus of hundreds of thousands of distressed migrants, many of whom travel through, die, or resettle in Mexico. Weather through technical, economic, and militarized support for Central American dictatorships (Martínez, 2017); the unintended formation and strengthening of deadly gangs (MS-13 and Barrio 18 in El Salvador, the Zetas in Guatemala and México) as a result of U.S criminal, social and migration policies during the 1970s-1980s; or U.S. power over the market economy, U.S. intervention in LAC has aggravated poverty, inequality, illness and death (Bulmer-Thomas, 1987; Burgois, 2004; Martínez, 2017).

3.1 From the European colonization to the American takeover

Since the sixteenth century, the acquisition of Latin American goods became of interest to European and North American elites. Their primary interests were gold, silver, copper, coffee, cotton, sugar, and banana (Woodward, 1985). Forced displacement and health have been related since 1523, when Spaniard colonizers arrived at LAC and became enchanted with the richness and fruitful lands of the indigenous people. According to Eduardo Galeano, the colonizing period was characterized by hunger and repeated epidemiological outbreaks of measles, tetanus, salmonella, leprosy, and yellow fever amongst indigenous families. Both hunger and disease were perpetuated by expanding the "colonial economy" of European markets (Galeano, 2015). Constant enrichment,

mostly through exploiting the colonies' precious metals, required forcefully displacing and enslaving thousands of indigenous families to seize the land and assure enough workforce. Between 1760 and 1809, Mexico alone enriched European countries with more than 5 billion dollars' worth of gold and silver (Galeano, 2015).

During the same period of 1760-1809, there was a sharp decrease in population growth. According to Jorge Brea in "Population Dynamics in Latin America," nearly 90% of the LAC population had perished by 1760, going from 50 million indigenous people before the arrival of European colonizers to less than 4 million (Brea, 2003). Brea and colleagues (Brea, 2003) attributed the high death rates to epidemics brought by flows of incoming people from Spain, dire living and working conditions, and nonexistent health infrastructure for locals. From 1650 to 1850, numerous and evident health and social inequalities emerged. Spanish and Portuguese colonizers inserted race/ethnicity, besides socioeconomic status, as a determinant of who lived and died in LAC. In Mexico, for example, a cast system was created in the 18th century based on skin color and parental race/ethnicity, with lighter skin parents conferring higher social status (Secretaria de Cultura, 2020). Albeit, limited opportunities to prosper slowly emerged for *mestizo* individuals: those with mixed indigenous and Spanish ascendance in the 16th century (Navarrete & Jones, 2020). Still, native communities were kept enslaved by debt, threats, or law, receiving catechism as "payment" for their work following Hernan Cortés arrival in 1521 until 1542 with the Spanish "New Laws"; however, in Mexico, much resistance to abolish the *encomiendas* (Lacas, 1952; Neiva Hehl & Montenegro, 1965). Likewise, reading and writing were privileges for those casts deemed worthy and prohibited for black and indigenous people. These systems of oppression designed by a group of people to maintain their economic power continue to exist today,

contributing to the growing socioeconomic inequality that drives migration (Hamilton & Chinchilla Stoltz, 1991).

Inequality in LAC did not end with independence from European colonies in 1821 (Secretaría de la Defensa Nacional, 2016). With the introduction of capitalism in the nineteenth century, a series of political and economic reforms continued to benefit European ancestry, lighter skin color, wealthy families, and foreign investors. In many places throughout LAC, communal land was privatized, and the most fertile regions were given by governments to private investors, displacing millions of indigenous and rural families again to less fertile land limiting their capacity to produce enough food, and therefore being forced to work at the *fincas* and *haciendas.* The focus of agriculture shifted from self-sustenance to crops that had value in the global stock market (i.e., coffee, banana) (Hamilton & Chinchilla Stoltz, 1991). Within the first half of the 20th century, agriculture exploitation was the driving force for desperate migration in most Central American countries and other parts of the Global South. By 1918, Central America had enriched Europe and North America with more than $45 million. However, the demand to expand successful foreign businesses in LAC required increasing forced recruitment and enslavement of African and Indigenous people. The consolidation of the export-led economic model following the global economic recession brought by WWI stimulated regional recovery plans and large foreign investment in agriculture and exportation infrastructure; however, health and social protection for people who worked the land remained a luxury (Bulmer-Thomas, 1987).

The history of emigration from Mexico differs slightly from that of Central America, yet both are heavily influenced by foreign interventions (Brown, 1914; Office of the Historian, N/A). Keeping in mind the historic geopolitical and economic relation with Mexico, migration trends towards their neighbor country occurred under similar emerging free-market ideologies (Neiva

Hehl & Montenegro, 1965). Migration from Mexico towards the U.S. was fortified after the 1848 resolution of the US-Mexican war and the signing of the Treaty of Guadalupe Hidalgo—where Mexico was coerced into selling a large portion of its territory for USD 18 million (*The Treaty of Guadalupe*, 1848). US efforts to expand their global presence and rebuild their national economy with a limited inflow of cash required low-wage workers (Hirschman & Mogford, 2009). It is then that the US benefited from the dire living conditions of many rural living and low-income families in Mexico by offering employment opportunities. Historic economic theories on migration suggest wage differentials as a major push factor for migration, "moving from low-income areas to areas of high income" (Fligstein & Rossi, 2014, p. 3).

Migration from Mexico slowly picked up as the US offered $1.50 a day wages while similar efforts paid 12 cents in Mexico (Lebergott, 1960). The penetrating influence of the U.S. was not limited to Mexico. Central America soon learned about "The American Dream," which gave rise to important migration flows and migration channels previously unthought of. Migration trends increased from 500 people recorded between 1890-1900 to 8,000 individuals between 1900-1910 (Hamilton & Chinchilla Stoltz, 1991). The rise of circular and labour migration from Mexico towards the U.S might reflect the need for improving socioeconomic conditions for many low-wage rural, semi-rural, or urban families. Notwithstanding, for those who remained in Mexico, important and uneven distribution of wealth and social inequality made living conditions more challenging. Between 1850 to 1900, the population grew from 7.7 million to 13.6 million triggering important employment, housing, education, and social services scarcity (Brea, 2003).

Economist and economic historian Leandro Prados de la Escosura assessed Latin America inequality by analyzing the initial inequality of colonial and postcolonial periods. The internal uneven power dynamics gave rise to institutions designed to protect the elites and further limit the

poor's ability to prosper (Prados De La Escosura et al., 2007). Based on 1950s Gini regression models, Prados analyzed Mexico's inequality index between the late 1800s and the pre-revolutionary period; there, Prados estimated a pseudo-Gini index of 27.8 Mexico (1913), showing a moderate increase. By 1900, nineteen percent of the population was urbanized, with almost 3 out of 10 individuals able to read and write (Astorga et al., 2005). The economic independence and household prosperity promised by the U.S. saw a dramatic increase of undocumented Mexican labor migrants (from 103,000 in 1900 to 222,000 in 1910) (Prados De La Escosura et al., 2007). As historic circular and labour migration brought prosperity and increased opportunities for many individuals, family reunification and labour demand forged new or reinforced previous migration channels (Hamilton & Chinchilla Stoltz, 1991). Between 1910 and 1929, U.S. records estimated 661,000 mostly Mexican labour migrants residing within their territory; however, soon deporting 400,000 migrants back to impoverished living conditions in many rural parts of Mexico (Siegel, 2020). There was an association between increased migration from Mexico to the U.S. during the Mexican Revolution era (1910-1917); however, drivers for migration shifted from economic towards a mixed-motive migration, including desperately escaping violence, political and religious persecution (Gutierrez, 2013).

The period of 1900-1910 showed a low growth rate (1.6%) in Mexico. The low growth rate could allude to either hazardous living conditions associated with war, food insecurity, and/or forced displacement and migration (Hofman, 1953). For the rest of Latin America, describing a clear picture of the health status across the region is difficult as national public health efforts and health system coverage were limited to State capitals and public health surveillance. The Pan-American Health Organization estimated an average life expectancy of 29 years of age compared to 48 years in North America, while 25% of Latin-American children died before their first

birthday (Panamerican Health Organization, 2012). The short life expectancy was likely associated with revolutionary movements, hazardous working and living conditions—increasing the risk of infectious, communicable diseases and trauma—and lack of access to health care (Brea, 2003; Galeano, 2015).

During the Mexican revolution period (1910-1920), foreign-born individuals in the U.S. grew to 17,000, mostly Mexican immigrants. However, the US 1917 Immigration Law severely restricted access to circular migrants and irregular migrants (UNECE, 2016). The U.S. employed a nationalistic approach to surveillance and national biosecurity (strategic planning aimed at managing health risks through policy and frameworks), forcing many circular economic Mexican migrants into a discriminatory and xenophobic quota system (Dorado Romo, 2005). All migrants were forced to pay a daily USD 8 quota (equal to $163.49 PPP). In addition, their passport was subjected to medical approval, including a biometric exam—eversion of eyelids in search of viral or parasitic infections, respiratory, cardiovascular, neurological or skeletal irregularities and I.Q./mental health examination (Dorado Romo, 2005). The quota and biometric discrimination system in place were justified under U.S. national public health guidance—similar to what Michael Foucault would have referred to as Biopower, a form of power that "endeavors to administer, optimize, and multiply [life], subjecting it to precise controls and comprehensive regulations" (Foucault & Hurley, 2008). In August 1917, the United States Treasury Department published the "Medical Inspection of Aliens" guidebook excluding from admission to the U.S. (United States., 1918):

> All idiots, imbeciles, feeble-minded persons, epileptics, insane persons; persons who have had one or more attacks of insanity at any time previously… persons with chronic alcoholism, paupers, professional beggars, vagrants, persons afflicted with

> tuberculosis or dangerous contagious disease, persons not comprehended within any of the foregoing excluded classes who are found to be and are certified by the examining surgeon as being mentally or physically defective; persons who have been convicted of or admit having committed a felony or other crime or misdemeanor involving moral turpitude, polygamists, anarchists, prostitutes; persons who attempt to import prostitutes; persons hereinafter called contract laborers; persons likely to become a public charge; persons who have been deported under any of the provisions of this act, and who may again seek admission within one year from the date of such deportation; persons who are assisted by others to come, unless it is … all aliens over 16 years of age, physically capable of reading, who can not read the English language, or some other language or dialect. (United States., 1918, p. 51)

Medical examinations included humiliating men and women by forcing them to be bare naked in front of U.S. immigration officers and undergo decontamination practices with toxic chemicals. According to historian David Dorado Romos, U.S dehumanizing assessment and decontamination practices to "delouse" Mexican migrants reached German Scientific journals in 1938. The journal "praised the El Paso method of fumigating Mexican immigrants with Zyklon B," possibly encouraging its adoption for similar decontamination purposes (Dorado Romo, 2005, p. 223). Thus, while US border immigration practices systematically humiliated and dehumanized human beings; they persisted—to a lesser extent—to deter and exclude migrants deemed as a public charge, criminals, or "disease carriers" (Dorado Romo, 2005, p. 229).

3.2. Political Economy and Violence in Central America

Improvements in health, social and economic sectors during the first portion of the twentieth century slowly emerged in LAC. However, the economic and political agenda continued to overshadow the lives of families and individuals. Newly liberated and independent countries continued to implement colonial practices such as forced labor with meager wages to manipulate the agricultural sector (Dorado Romo, 2005). Emergency medical care (i.e., medical amputations) and enough food to survive were the only services. In addition, the direct influence and interest of the U.S. exacerbated health and social inequalities in LACs. The level of U.S. influence towards Mexico and Central America penetrated everyday society. Ever since the Monroe Doctrine in 1823, U.S. has claimed complete economic and political authority over Latin America (Gilderhus, 2006; Office of the Historian, N/A; Wheless, 1914). Since then, the U.S. relationship with LACs has been one of economic power and economic monopoly masked under the umbrella of companionship and protection (Office of the Historian, N/A).

Andrew Morrison and Rachel May argued that such forced displacement of rural-living families gave rise to violent events between *campesinos* and the elite (Morrison & May, 1994). While the structural violence in Central American countries differs in timelines and reasons, many of the root causes of migration are deeply connected with "violence and control over resources" (Al Jazeera, 2018). Sana Saeed, Al Jazeera correspondent for "How U.S. Involvement in Central America Led to a Border Crisis," unravels the history of U.S. foreign interventions in Central America and how these have "forced thousands of families to flee for the Mexico-US border today" (Al Jazeera, 2018). Under the Monroe Doctrine era and later during the Cold War—the U.S. economic interests took the shape of agricultural monopolies in Mexico and LAC (J. Castañeda, 1990; Loveman, 2016). On one end, the U.S. feared American business partners in Central America and Mexico would lose economic power over rural-living and indigenous

communities as regional trade agreements attempted to improve working and paying conditions. Consequently, these agreements affected production and exportation for agribusiness owners (Cavalla Rojas, 1981; Dietz, 1984). On the other end, U.S foreign interest did not only lie in economic control over Latin America but made LAC their political expansion agenda (LeoGrande, 1998, pp. 1977–1992).

The forced labor, displacement, and impoverishment continued to penetrate the already struggling economies and communities in many parts of Latin America. As migration flows from Mexico to the U.S. declined from the 1990s onwards, increasing levels of violence continued to drive at first a steady flow, then massive migration of Central Americans' to the U.S. (Cohn et al., 2017). Such is the case of Guatemala, Honduras, El Salvador, and Nicaragua' (Morrison & May 1994). Impoverishment and oppression in LAC – embodied in-migration – had been linked to "discriminatory international policies —such as NAFTA –originating in the United States as well as unequal economic practices with colonialist roots in Mexico" (Holmes, 2013, p. 92). The deal between Mexico, U.S, and Canada in 1992, known as the North America Free Trade Agreement (NAFTA), had two main objectives: 1) reduce tariffs on imported and exported goods and 2) reduce irregular migration to the U.S. The latter under the premise that strengthening Mexico's economy could increase job opportunities and reduce people's need to migrate north. In the words of then-President Salinas de Gortari (1994), the ultimate goal was the desire of Mexico to "export more tomatoes and fewer tomato pickers" (Roldán, 2015). Anthropologist Seth Holmes described how NAFTA severely crippled already s local economies, further impoverishing indigenous families (Holmes, 2013). On January 1, 1994, an indigenous social uprising against the government's neoliberal agenda—which had been organizing for over 15 years—erupted in

Chiapas. The National Zapatista Liberation Army—named after the revolutionary hero Emiliano Zapata—rose against the Mexican government to suspend corn subsidized farming.

In contrast, U.S large subsidized corn farming took over (Holmes, 2013). Indigenous farmers – historically employing Guatemalan migrant laborers—demanded: "work, land, housing, food, health, education, independence, freedom, democracy, justice and peace" (Holmes, 2013). However, government efforts to silence indigenous individuals lead to the 1997 massacre of 45 indigenous internally displaced migrants in San Pedro Chenalhó, Chiapas, amongst them boys, girls, young men, and women (Comisión Nacional de Derechos Humanos, 2021). To this day, rural farmworkers are oppressed by the elite and continue to suffer from bilateral agreements creating conditions that leave many with no other choice than to migrate.

3.3 The case of Guatemala

Similar to Don Abelino, millions of Guatemalans have migrated to Chiapas, Mexico, to harvest the lands of others or head north, all to find better opportunities. Between 2018 and 2020, almost 452,000 Guatemalans were apprehended at the US-Mexico border (Department of Homeland Security, 2018; Department of Homeland Security, 2019a; *U.S. Border Patrol Southwest Border Apprehensions by Sector Fiscal Year 2020 | U.S. Customs and Border Protection*, 2020); while 129,334 apprehended by Mexican authorities during the same period (44,680 in 2018; 54,412 in 2019 and 32,000 in 2020) (Gobierno de México, 2018, 2019, 2020). The aftermath of US foreign interventions and industrialization, natural disasters, economic crisis and State failure, structural adjustment programs, and U.S economic crises have forced thousands of migrants – asylum seekers, irregular migrants, and seasonal migrants – to head northwards (Suarez-Orozco, 2019). Abelino's late diagnosis of TB is the consequence of what Dr. Seth

Holmes—a medical anthropologist who has dedicated his life to studying social suffering amongst rural-living migrant farmworkers—calls structural violence of social hierarchies: Abelino's health outcomes were in the function of employer's permission to seek care, provision of enough income, and transportation assistance. His delayed treatment might have been the consequence of dire living conditions that forced him to migrate as well as work-related health risks (Holmes, 2013). This type of subtle violence normalizes the scarcity of health services and the lack of timely TB care for Central American migrants. Morrison and May take on Guatemala as the perfect case study to describe the structural violence emerging in Central America, which drove the significant internal displacement and transborder migration between 1976 and 1981 (Morrison & May, 1994). The migration trends described by Morrison and May—mostly seasonal and /or poverty-driven migration—persists until now.

The contemporary history of Guatemala is yet another plagued with indigenous genocide, civil unrest, and U.S. capital interest (Morrison & May, 1994). Guatemala had three historical waves of migration resulting from 1) US foreign interventions (1950's), 2) the 1976 earthquake, and 3) violence following a decade-long civil war, heavily influenced by the first point mentioned most predominantly in the 1980s (FLASCO Guatemala, 2017). In 1954, the 36-year civil war began following the US CIA-sponsored military coup against President Árbez—advocate for the social and legal rights of *campesinos (Al Jazeera, 2018).* Morrison accredited the violent history in Guatemala to the shift from sustenance farming to land tenure. With deeper consciousness on inequality and oppression of indigenous and rural living people and community integration, revolutionary movements rose (Bulmer-Thomas, 1987; Morrison & May, 1994). The Jimmy Carter administration viewed Guatemala as a viable democracy that could be corrected under the ´human rights policy´ "suppos[ing] that the U.S. government, returning ´to the (liberal) roots of

the nation, ´would guide its conduct towards other nations of the world based on their degree of respect or violation of the rights of individuals" (Cavalla Rojas, 1981, p. 121). The U.S. took advantage of the government countering civil unrest emerging in Guatemala during the 1970s to justify their ´human rights policy´ and intervene with the support of the Guatemalan government (Cavalla Rojas, 1981). Following multisite uprisings, the government-approved death squads, the U.S., and government-funded paramilitary organizations began torturing, raping, assaulting, killing, abducting, and displacing unarmed people in rural regions (Morrison & May, 1994). According to the International Organization for Migration (IOM), a total of 6,700 Guatemalans migrated northwards within the same period following the U.S sponsored military junta (Caballeros, 2013).

Climate and environmental migration also became a push factor in 1976 Guatemala. A large-scale earthquake shocked the nation and further impoverished the already struggling communities (Hamilton & Chinchilla Stoltz, 1991), leading to a dramatic wave of migration estimating to be around 56,843 during the 1980s. One of the main reasons for the significant transborder movement from Guatemala to either Mexico or the U.S. resulted from post-earthquake damage and crippling poverty (Smith, 2006). For starters, unemployment was in part due to physical injuries and the death of the primary breadwinner; the death of the main or both income providers contributed to the increased impoverishment of 85% of Guatemalan families. In addition, the agricultural sector was damaged, jeopardizing harvest, farming and subsistence. The Government's capacity for social assistance was already fragile. The health systems capacity was at a staggeringly low level as five hospitals, three health centers, and two health posts were destroyed, and six hospitals, eight health centers, and 53 health posts were considerably damaged. (United Nations Economic and Social Council, 1976).

The unity amongst affected Guatemalans following the 1976 earthquake was swiftly countered by mass-murderous campaigns targeting community organizers and laborers who protested against the living and working conditions (Morrison & May, 1994). Furthermore, violence spread like wildfire during Reagan's administration (1981-1989) as fear of ´Soviet invasion´ encouraged foreign investment in paramilitary groups (Cavalla Rojas, 1981). According to President Ronald Reagan's 1984 address to the Nation concerning U.S. policies in Central America, "The people of Central America can succeed if we assist." His proposal included budgetary re-allocation towards strengthening geopolitical borders and national security (Reagan, 1984). On March 16, 1986, Reagan insisted on the critical importance of U.S foreign financing towards ´democratic allies´ referring to allied Central American dictators justifying their 100 million dollar aid package to support ´freedom fighters´ or ´democratic resistance´ to "end this communist menace at its source" (Reagan, 1984). Reagan proceeded to question the American people if America "will we permit the Soviet Union to put a second Cuba, a second Libya right on the doorstep of the United States". He referred to the "communist menace" as Sandinista rebels – those indigenous farmworkers fighting government oppression (Reagan, 1986). The aftermath of such murderous and oppressive campaigns, rather than liberating oppressed individuals, was the death of many innocent, hard-working indigenous families. According to Victoria Sandford, anthropology professor, Guatemala experienced, between 1981 to 1983, seventy-two military-led massacres against 3,102 unarmed peasants—mostly indigenous Mayan (Sanford, N/A).

The ongoing U.S sponsored violence in Guatemala displaced and forced several hundred thousand Guatemalans to flee. During the 1980s, an internal report published by the Migration Policy Institute suggested an estimated 150,000 people, mostly Mayan, were killed or disappeared. Over one million families were internally displaced, and over 200,000 fled to the neighboring

country, Mexico. During the peak of the war, an estimated 13,785 Guatemalans made their way to the U.S. in 1977; this number more than tripled in 1989 to 45,917, decreasing to 22,081 by the end of the war (1996) (Jonas, 2013). Between 1990 and 2000, a total of 500,000 — 6% of Guatemala's population at the time— had emigrated elsewhere. Ten years later, the number almost doubled to around 1,4000,000 people living outside of Guatemala (Rincón et al., 2000, pp. 1980–1996; Rivadeneira, 2001). However, the journey is not always as easy as being apprehended or deported. More often than not, Central American migrants fall within the brutal dynamics of power, money, and control. In 2010, a group of organized crime members murdered 72 migrants in San Fernando, Tamaulipas; in 2012, police found 49 migrants dismembered in Cadereyta, Nuevo León (Arroyo, 2021). A small town in rural Guatemala recently mourned the brutal killing of 16 young indigenous Guatemalan migrants in Tamaulipas, Mexico heading to the U.S-Mexico border. Amongst those killed were a fifteen-year-old boy, Robelson Isidro, and thirteen other teenagers, leaving mothers, fathers, and siblings struggling to bring their sons back. According to Los Angeles Times, Robelson told his mother before leaving: "I will fight so that my dreams come true. I have to support my brothers in life. I will take them out of poverty" (Linthicum & Abbott, 2021). These teenagers were killed by twelve Mexican State police officers (Arroyo, 2021) who remain unpunished (Amnesty International, 2021).

3.4 Sociodemographic and health system characteristics in origin and resettling country

Poverty and oppression-driven migration is – unfortunately – a shared experience amongst Central American and Mexican economic and violence-driven migrants (Bojorquez et al., 2021). To this point, Dr. Seth Holmes described in his book *Fresh Fruit Broken Bodies* the impact of poverty and oppression on the health of three indigenous labor migrants from Oaxaca, Mexico.

Ironically enough, one of Dr. Holmes' friends in his book was too named "Abelino" – an indigenous, internally displaced migrant from Oaxaca (Holmes, 2013), both migrating from their respective countries' origin in search for better economic, social, and health opportunities.

The country profiles from which both Abelino's emigrated have striking similarities and important differences in inequality. In terms of similarities, both Abelinos' came from rural living communities in Mexico and Guatemala, with important overall unemployment and youth unemployment rates and pronounced income inequality (Table 1).

Table 1. Socioeconomic profile of Mexico and Guatemala

Variables	Mexico	Guatemala
Urban Population % (2019)	80.44%	51.43%
Poverty rate (% living under $USD 1.90 per day)	1.7% (2018)	8.8% (2014)
Population in urban areas	80.20%	51.50%
Unemployment rate of the total population 2019	3.40%	2.70%
Youth unemployment rate in 2019	6.80%	5.60%
Population projection for 2050	155.2 million	26.9 million
GDP per capita $USD	1.26 trillion	76.71 billion
GINI index (2018)	45.40%	48.3 % (2014)

Source: (*Key Migration Statistics*, 2019; *Migration & Development: Remittances*, 2020; *World Bank Open Data*, 2019)

As far as the health systems capacity in Mexico and Guatemala, they share similar average life expectancy (75 vs. 74 years), yet marked differences exist between Mexico and Guatemala. Concerning maternal mortality ratio, Guatemala reported 3.8 times higher maternal deaths per 100,000 live births (27.7 in Mexico by 2020 and 107 in Guatemala during 2018). The infant mortality rate was 1.7 times higher in Guatemala and 36% more stunting in children under five compared to Mexico. Both countries were below OECD standards on government health

expenditure as a percentage of GDP (see Table 2). (Institute for Health Metrics and Evaluation, 2019; OECD, 2019; Pan-American Health Organization, 2017; *World Bank Open Data*, 2019)

Table 2. Health indicators in Mexico and Guatemala

Variables	Mexico	Guatemala
Average Life expectancy at birth (total)	75 years	74 years
Maternal mortality ratio (per 100,000 live births)	27.7 (2020)	107 (2018)
Under five mortality rates (per 1,000 live births)	14.2 (2019)	24.5 (2019)
Infant mortality rate (per 1,000 live births)	12.2 (2019)	20.7 (2019)
Percentage stunting children under 5	10% (2016)	46% (2015)
Prevalence of Diabetes	F 11.5% M 10.9%	F 10.4% M 8.9 %
Prevalence of Tobacco	14.20%	-
Prevalence of Coronary Heart Disease	F 17.3% M 22.3%	F 20.4% M 22.0%
Overweight/Obesity	F 66.0% M 63.6%	F 59.9% M 51.4%
Government expenditure on health as % of total GDP (2018)	5.30%	5.07%

Source: (Institute for Health Metrics and Evaluation, 2019; Pan-American Health Organization, 2017; *World Bank Open Data*, 2019)

From the presented evidence, the social, economic, and political conditions influencing both, Abelino emigrating from Guatemala and his Mexican counterpart's migration journeys were driven by important historical and current social forces, which profoundly impacted their health status (Mukherjee, 2018b).

As for the shared experience of Abelino moving from Guatemala to Mexico, the ultimate choice to migrate — as millions of people from Guatemala — was one forced upon him even before his migration journey had started. A forced-choice influence by his community's involuntary displacement following government-led and the U.S. influenced violence; capital penetration in the 1940s and 1960s; and his parents' further impoverishment following the 26-year internal war and the earthquake between the 1970-80s. The death of Abelino's parents might have been the direct or indirect consequence of structural adjustment programs in 1980's Guatemala, weakening the health and social protection for the poor. Moreover, Abelino's delayed TB diagnosis and treatment is the combined consequence of direct structural and institutional violence towards his community and extended family penetrating across borders (Farmer, 2009; Galtung, 1969). Overall, Abelino's and thousands of Central American migrants' social suffering is the direct consequence of accumulated everyday violence inflicted upon the poor. In 2009, he became part of the 1.4 million international migrants from Guatemalan who supported their families economically (Caballeros, 2013). In 2019, Abelino personally contributed to the 13.10% in remittances received in Guatemala per GDP (*Migration & Development: Remittances*, 2020); however, reaching a halt in June 2020 as deteriorating health prohibited – despite desperate attempts – to continue working in Mexico.

It is unknown if Abelino's acquired TB was a late presentation of latent TB caught during his migration journey, upon his seasonal transit through Mexico, or due to his working and living conditions in Chiapas or Guatemala years before had to migrate. What we do know is the current weakened structure for TB care in both Guatemala and Mexico, despite international treaties protecting the right to access healthcare in both countries, public health surveillance programmes and TB-treatment–in theory– free and widely available (CENAPRECE, 2017; Soto Menegazzo et

al., 2018). In 2019 alone, both countries experienced significant delays in achieving the TB testing, treatment, and adherence as recommended by the 2030 stop TB goals (*Stop TB Partnership*, 2021a). Concerning TB prevalence, after adjusting for the total population, Mexico experienced an increase of 3% (30,000 new cases) and Guatemala 2% (4,600 new cases). Immunization coverage was below international recommended standards, especially pronounced in Mexico with a 76% coverage rate, even below the LAC average. Likewise, both countries experienced an increase in Drug-Resistant TB strains (up by 2% in Mexico and 8% in Guatemala), loss to follow-up increased in Mexico by 10% while in Guatemala decreased by 5%. Both Mexico and Guatemala did not reach their national TB target for diagnosis and treatment (see table 3).

Table 3. TB country response and burden of disease

Indicator	**Mexico**	**Guatemala**
TB number of deaths (2019)	2560 – up by 3%	420 – up by 9%
Vaccination rates % BCG coverage – LAC average 83% ****	76% (2019)	86% (2019)
Percentage of deaths causes by TB **** (2014)	0.35%	0.49%
Percentage YLDs caused by TB (2014)	0.079% of total YLDs	0.11% of total YLDs
Percentage DALYs caused by TB (2014)	0.32% of total DALYs	0.40% of total DALYs
Increase in TB prevalence	30,000 (1,300 children) – up by 3%	4,600 (650 children) – up by 2%
People with TB on treatment	23,702	3,716
People who developed DR-TB	970 – up by 2%	130 – up by 8%
Missing people with TB	6,298 –up by 10%	884 – down by 5%
TB national targets for diagnosis and treatment	91%	94%

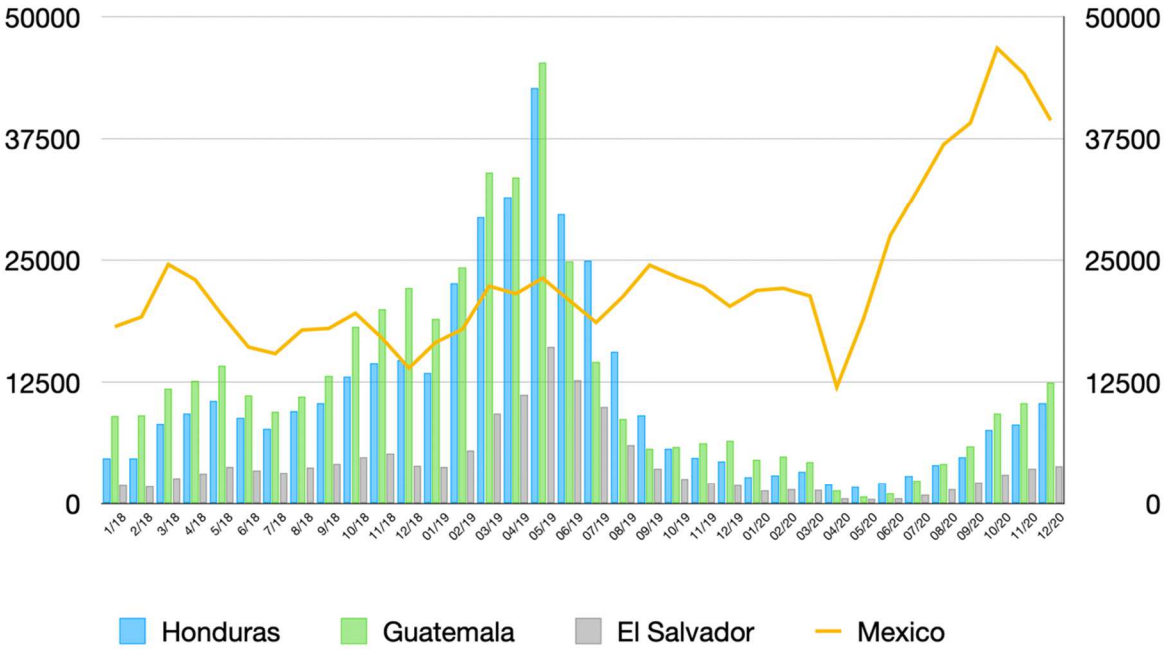
Source: (*Stop TB Partnership*, 2021a)

As illustrated above, despite international and national TB programmes designed to ensure free access, effective service delivery, and provision of care as well as active epidemiological surveillance for citizens and non-citizens alike, limited access to curative and resultative care is quite evident. What can we expect for those who must remain unnoticed? What type of access or care migrants can receive if already limited and insufficient for citizens? What, if any, are the provisions in place to ensure equitable access to TB – the easiest to treat and most monitored disease in the world? What happened to TB and other medical care for migrants in Mexico before and during the COVID-19 pandemic?

4. Contemporary Migration in Mexico before and during COVID-19 pandemic

The World Health Organization's "Promoting the Health of Refugees and Migrants Draft Global Action Plan, 2019-2023" stressed the imperative call to action for countries worldwide to improve access to many health promotion, prevention, provision, and protection services that are comprehensive and inclusive, with a special emphasis for women, adolescents, children, and sexual minorities (World Health Assembly, 2019). Nevertheless, without safe and orderly migration, as well as and national health governance capacity-building and cooperation to meet the migrant populations' needs, providing comprehensive and high-quality care is not possible (Bhabha & Abel, 2019; Kolitha Wickramage & Annunziata, 2018). Furthermore, a recent report published by UNHCR on forced displacement from Central America to Mexico highlights the increase of 1962% of asylum claims in Mexico between 2014-2019 (González González, 2021). The sharp increase from 3,423 asylum claims to 70,609 in 2019 shows evidence that social, economic, and health inequalities in Central America are far from being resolved. In 2020 alone, a total of 32,242 individuals from Guatemala, 38,995 from Honduras, and 8,670 from El Salvador

(out of 87,260 total in 2020) presented themselves to Mexican immigration authorities (Gobierno de México, 2020); however, 53,891 migrants were returned to their country of origin despite international recommendations by human right bodies to end deportation practices (Gobierno de México, 2020). Surprisingly, apprehensions of Mexicans crossing to the U.S. increased dramatically during 2020 (*U.S. Border Patrol Southwest Border Apprehensions by Sector Fiscal Year 2020 | U.S. Customs and Border Protection*, n.d.). This raises important questions about Mexico's capacity to address the needs of resettling Central American migrants when its citizens are increasingly attempting to leave the country (see Figure 2).



Apprehensions at US-Mexico border since January 2018 - December 2020. The figure illustrates a dramatic decrease in border apprehensions by Central American migrants ever since border closures in March 2020. Paradoxically, border apprehensions of Mexican citizens dramatically increased from April 2020 with a pronounced peak between August-September 2020.

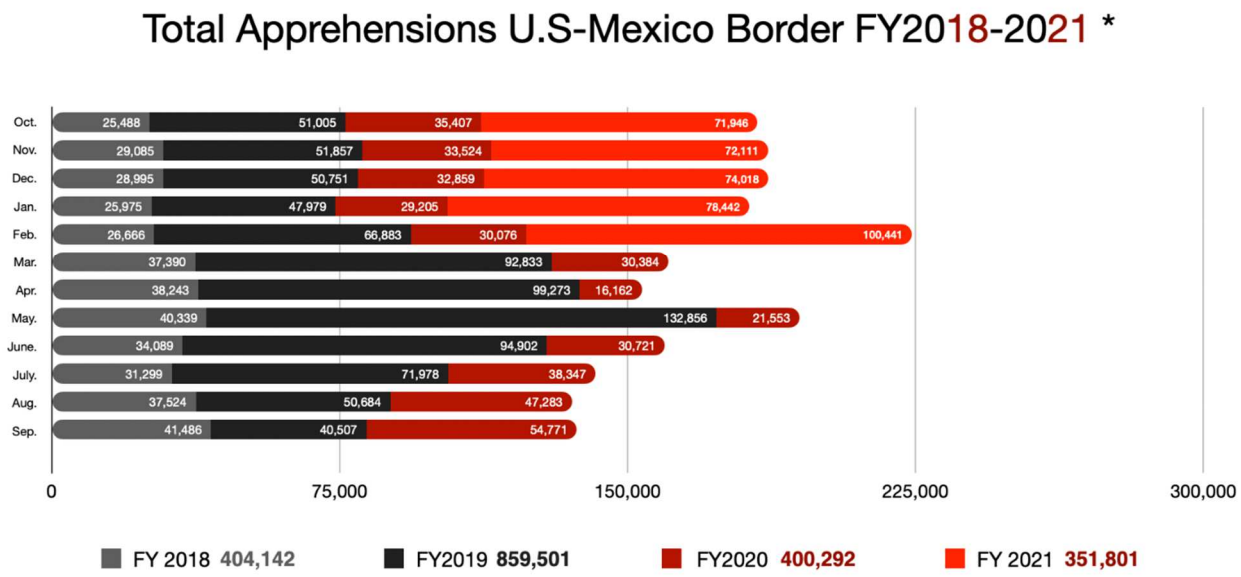
Figure 2: Total apprehensions at U.S Mexico border between January 2018 – December 2020 by country of origin.

Ever since the second half of the 19th century, Mexico has been one of the top global players in migration. The limited employment opportunities and scarce opportunities for development

amongst the country's poorest lead Mexico to be recognized worldwide as the largest emigration country in LAC and the second-largest in the world (*World Migration Report 2020*, 2019). Health and social inequalities contribute to the pool of push-pull factors that drove a total of 12 million Mexicans to live abroad in 2019 (*World Migration Report 2020*, 2019).

With this data, one might wonder: Why is it that a country in which socioeconomic conditions force thousands of people to migrate to the US has now become a major hosting country for the poorest in the American Continent? To illustrate the deteriorating conditions faced by many migrants heading northwards through Mexico, the following sections will borrow excerpts, ideas, and data from a published non-peer review report on transit Migration. The work was published on the website of "Lancet Migration, a global collaboration to advance migration and health," titled: "Situational Brief: Transit Migration in Mexico during COVID-19" (Sedas et al., 2020). It was a collaboration of various co-authors, including Dr. Mercedes Aguerrebere, Dr. Luis Alberto Martinez, Dr. Itzel Eguiluz, Dr. Luis Eduardo Zavala, and Prof. Jacqueline Bhabha; however, the idea, concept, content, and recommendations were original and based on personal experience and extensive recollection of evidence captured between March 2020 and May 2020.

Ever since 2018, unmatched levels of Central American migrants (mostly from Guatemala, Honduras, and El Salvador) made their way through Mexico with the initial intention to either apply for asylum at the U.S Mexico border or attempt to cross to the U.S unnoticed (see Figure 3).



Total Apprehensions at the U.S Mexico border between 2018-2021. In 2018, there was a sharp increase in U.S Border apprehensions from 250,838 in 2017 to 466,624 in 2018. In 2019, the number of apprehensions continued to rise to 799,685 later decreasing to 516,577 in 2020 and 351,801* in 2021.
Source: Self-Elaboration from U.S. Customs and Border Protection data, 2018-2021* (data up to date until 04/10/2021)

Figure 3: Total apprehensions at U.S Mexico border between 2018-2021

The movement of Central Americans was unique. It was the first —widely televised— the massive movement of people (BBC News Mundo, 2021). Between 2018 and 2019, around nine caravans of 3,000-6,000 people, mostly children, women and families, made their way northwards through Mexico. In 2020, at least three reported caravans emerged as COVID-19 related poverty, lockdowns, and unemployment that forced around 400,000 migrants from Central America to migrate north to either seek asylum at the U.S and remain in Mexico under the Migrant Protection Protocol (MPP), seek asylum in Mexico or attempt to cross the US-Mexico border. By 2021 at

least one (1) caravan of around 7,500 people was reported; however brutally stopped at the US-Guatemala border (Proceso Digital, 2021).

At the face of the "Migrant Protection Protocol" (MPP)—a bilateral U.S-Mexican agreement that states that Central American asylum applicants to the U.S. must wait for the resolution of their case in Mexican ground—62,000 applicants were forced to await in Mexico (Department of Homeland Security, 2019b; Human Rights Watch, 2020). Numerous reports have highlighted the deteriorating impact of U.S influenced policies over these individuals' living, working, and traveling conditions. Many migrants were forced to live and await in dangerous, overcrowded, and unsanitary conditions in Mexico's northern border cities (Human Rights Watch, 2021) with already underfunded shelters and health systems, increasing migrants' structural and syndemic vulnerability. U.S. and Mexico's anti-migrant policies have been widely criticized by human rights experts and international humanitarian agencies (Chishti & Bolter, 2020; Médecins Sans Frontières (MSF), 2020; The Inter-American Commission on Human Rights (IACHR) & Organization of American States, 2019; Villarreal, 2020). Among the most worrisome aspects of such policies are how they directly or indirectly undermine the health-seeking capacity for thousands of migrants throughout the country.

4.1. Burden of disease of migrant populations in Mexico

**The following section contains fragments of a non-peer review Situational Brief published on the website of "Lancet Migration, a global collaboration to advance migration and health" (Sedas et al., 2020)*

Estimating the true burden of disease for migrants in Mexico traveling in caravans is a difficult task at hand, as epidemiological surveillance or disaggregated data for migration is weak. Nevertheless, striking results emerging from a 2018 systematic review and meta-analysis on global patterns of mortality in international migrants published by Aldridge, Nellums et al. show

significant differences in mortality between international migrants compared to the general population. Migrants had an increased risk of dying of infectious diseases – hepatitis, tuberculosis, and HIV— compared to the general population (Aldridge et al., 2018). However, reports from an academic observatory at the northern Mexican border (COLEF) described that 32.5% of caravan members in 2018 and 41.9% in 2019 expressed a health need, mostly relating to upper respiratory tract infections, fever, and diarrhea. An additional 5.4% of caravan members reported diabetes, 19.3% hypertension, 3% physical trauma, and 25.2% mentioned other concerns, including reproductive health (Colegio de la Frontera Norte, 2018; Colegio de la Frontera Norte (COLEF, 2019). An additional often neglected health issue is mental distress, a known consequence of exposure to violence (Médecins Sans Frontières (MSF), 2020).

The protracted uncertainty and stress associated with long delays waiting for asylum determinations, as well as the tensions generated by the unfamiliarity of new surroundings, the loss of familiar relationships and connections, the absence of adequate social protection measures, and the dearth of employment and housing opportunities further increase migrants' risk of developing mental health disorders (Buhmann, 2014). A study conducted in a shelter in Texas in 2017 reported that 32% of Central American migrants who transited through Mexico presented posttraumatic stress disorder, 24% major depressive disorder, and 17% both disorders (Keller et al., 2017). The Central American migrant population in Mexico comprises members with particular health vulnerabilities. While most recent migrants are between 18 and 29 years of age, 32.2% are between 30 and 44, and 5% are over 45 years (Colegio de la Frontera Norte, 2019). Amongst this population, the prevalence of diabetes, hypertension, obesity, and tobacco use is likely as high as it is among the domestic population in México and their home countries (Revisit table 2.).

As for tuberculosis, Medina-Macias, Stoesslé, and colleagues conducted a study in traveling migrants through Nuevo León and Coahuila between 2017 and 2019. Their research found that amongst 455 traveling asymptomatic migrants who tested negative for TB on rapid testing– the majority (71%) from Honduras, following Mexico (6.4%), El Salvador (5.9%), and Guatemala (5.9%), almost two out of ten migrants (18.4%) had latent tuberculosis; the higher prevalence of disease was amongst those who had more time residing in Mexico. Researchers also found lower rates for latent TB amongst Central American migrants than Mexican migrants; however, still low compared to national rates (Medina-Macías et al., 2020). Unfortunately, there is no publicly available data on the number of migrants being diagnosed nor treated for TB within federal nor state health systems.

Access to healthcare for migrants in Mexico is both fragmented and underfunded. The evolution of access to healthcare has been historically designed to provide the essential services to sustain life or provide care for 90 days (Rene Leyva-Flores et al., 2015). While access to healthcare and the right for the protection of health in Mexico is written down in the Mexican constitution and international treaties; the likelihood for migrants, asylum seekers, and refugees in Mexico to fulfill their right to healthcare is either limited or extremely scarce (Sedas et al., 2020). The following will describe a brief overview of access to healthcare for migrants while in transit or resettling in Mexico.

4.2 Access to healthcare at a federal level

*The following section contains fragments of a non-peer review Situational Brief published on the website of "Lancet Migration, a global collaboration to advance migration and health" (Sedas et al., 2020)

Mexico's healthcare system went through an important evolution following post-colonial industrialization and the strengthening of the nation. In response to rapid societal and economic

growth, emerging health risks followed. During the late XIX and early XX century, concern about emerging "white pest"—the way Tuberculosis (TB) was called—began to echo in Europe and liberated European colonies, in addition to the rapid spread of other infectious diseases such as typhoid and yellow fever. By 1907, following the first international tuberculosis conference in Berlin, Germany, Mexico sought to address tuberculosis with a business plan "by making insurance companies for the poor, they, the industrialists, will become rich; insurance companies against tuberculosis and other preventable diseases will appear" (Carrillo, 2000, p. 363). Thus, the first public health efforts to detect and isolate suspected cases of TB did not have the main purpose of alleviating those who were sick but maintaining the workforce debilitated by the disease to sustain the growth of the emerging post-colonial economy.

Mexico established the first health system in 1917 with a heavy focus on infectious disease control. Between 1920-1924, the Ministry of health expanded access to infectious disease care and laboratory testing capacity. Funding for TB public health interventions in Mexico was of great interest to the US as the government was concerned about Mexican seasonal migrants "spreading [the] disease" north. During the 1930s, the Rockefeller foundation—an N.Y.-based organization—facilitated binational public health vertical interventions in Mexico to control infectious diseases (i.e., typhoid), with little regard to diseases that are caused by socioeconomic conditions—such as TB (Farmer et al., 2013).

In 1978, WHO member states that participated in the Alma Ata international conference on primary health care established the need to achieve universal primary healthcare coverage by 2000 (International Conference on Primary Health Care, 1978). However, the next year this ambitious aim was reduced to "Selective Primary Care" (Walsh & Warren, 1979) which translated into minimal health care packages for the poor (Mukherjee, 2018c). It was until 1981, when

Mexico became a party to the International Covenant on Economic, Social and Cultural Rights (ICESCR) (15 years after it was written), that the country "recognized the right of everyone to the enjoyment of the highest attainable standard of physical and mental health" (*International Covenant on Economic, Social and Cultural Rights*, 1966). In 1983, Constitutional Article 4—the right to the protection of health—was added to the Mexican Constitution (Secretaría de Salud, 2015). This historic move from Mexico ensured that all citizens had access to health services in an equal, homogenous and addressing social determinants of health. Article 4 was then complemented with the General Health Law, in which the protection of health must be provided by issuing access to services. Unfortunately, people on the move were not explicitly considered in the ICESCR nor the Mexican Constitutional Article 4.

Moreover, the economic crisis that erupted in 1982 and the rising neoliberalism economic theory gave rise to Structural Adjustment Programs (SAPs): loans provided by the World Bank and the International Monetary Fund to low- and middle-income countries (LMICs) which were conditioned on the reduction of the country's public spending. This forced LACs to choose between investing in development (market economy) or investing in their community (health, education, and social services), restricted the opportunities for economic growth amongst the poor, and ultimately increased the number of emigrants (Diaz-Bonilla, 1990). Authors Paul Farmer and Jim Yong Kim highlighted how this approach leads to the assumption that government-funded social resources directed towards alleviating poverty and suffering—including those aimed towards migrants, although not explicitly mentioned—must be short of supply in order to invest in high-revenue and development projects (Farmer et al., 2013).

The provision of minimal care packages for the poor remains the standard in many countries as cost and effectiveness were substituted with cheaper services providing the minimum

required (under the justification that these are cost-effective) (Walsh & Warren, 1979). Ever since the 1980's SAPs in LAC, Mexico suffered major challenges and economic setbacks to bring their healthcare system to the average expected based on international standards. Mexico's efforts to improve access and quality to healthcare must be recognized; however, even an equitable distribution is questioned by many (Frenk et al., 2006, 2019; Gomez Dantes et al., 2011). Between 2000-2015, health expenditure in Mexico increased from US$ 480.50 (adjusted PPP) to US$1009 (PPP). Total health expenditure increased from 43.7% in 2000 to 53.8% in 2015, and out-of-pocket expenditure decreased (53.9% to 41.3%) (Gonzalez Block et al., 2020; OECD, 2019). The investment in healthcare linked to a health system reform improved the overall health of Mexicans during the first 15 years of the Millennium Development Goals (MDG) – which Mexico took pride in—however, improvements were uneven.

Since 2004, several policy measures—such as creating the Seguro Popular—have been adopted to improve equity in access to care by increasing health expenditure, reducing the high out-of-pocket expense, and moving closer to universal health coverage, particularly for the most vulnerable and impoverished people. Until 2014, the *Seguro Popular* offered migrants an opportunity to access 266 primary care services ranging from prevention to curative, 90 days, and continuous access to emergency care. (René Leyva-Flores et al., 2019). This announcement reflected on guaranteeing the Constitutional right to protect health for all people in Mexican territory (Art. 4), which expands to all individuals transiting on residing in the country. Likewise, Art.11 of the Mexican constitution states that all individuals have the right to enjoy the full protection of the Constitution as well as all international treaties and agreements Mexico signed (Art. 1) (*Constitución Política de Los Estados Unidos Mexicanos*, 1917; Dantés et al., 2011; Secretaría de Salud, 2015).

In 2015, Seguro Popular expanded its coverage to 66 specialized forms of healthcare. However, for irregular migrants, registering to the Seguro Popular became even more challenging. For irregular migrants to access healthcare, they had to present proof of residence, Social Security Number or birth certificate, government-issued ID, documents that most migrants either did not have or fear presenting (Rene Leyva-Flores et al., 2015; Secretaría de Salud, 2014). In 2015, Leyva and colleagues published a multisite project including data from 8,236 migrants transiting across eight shelters in Mexico between 2009-2013. They found that amongst those who expressed having a medical need (n= 2,231), about 60% sought care. From those who sought care, eight out of ten received care in shelters run by NGOs or civil society (80%), while a small minority utilized government-funded health primary health facilities (1.8%) or hospitals and clinics (2.5%). Surprisingly, contributing to Mexico's high out-of-pocket expense—3.5% of irregular migrants sought care in private institutions/clinics and 1% in local pharmacies. Leyva explained the high shelter utilization rate most probably associated to lack of trust (historical or current) to approach public health system facilities or restrained economic agency (Rene Leyva-Flores et al., 2015).

The second contemporary major reform on healthcare that affected migrants came at the arrival of the newly inaugurated president of Mexico, Andres Manuel Lopez Obrador (AMLO), in 2019. AMLOs' views on ending government and institutional corruption made his administration focus on shifting strategies on health system financing and coverage for the poor (*En Seguro Popular Había "Corrupción Sistemátic," Reclama Secretaría de Salud*, 2019). For years, the Mexican government had been submerged in government and private health sector high-level corruption scandals linked to stolen drugs and medical supply which affected delivery-chains and provision of healthcare (*En Seguro Popular Había "Corrupción Sistemática," Reclama Secretaría de Salud*, 2019; Frenk et al., 2019; Gonzalez Block et al., 2020).

While struggling to curb corruption, the new Mexican government drastically shifted *Seguro Popular* towards a new health program called *INSABI* (Institute of Health and Well-being) ran by the Ministry of Health (Secretaría de Salud, 2020). This is a centralized, government-controlled program that will only cover primary care for all, will be limited secondary care and uncertain tertiary care to 71.6 million people for free (with no significant increase in health expenditure to cover the costs), and to move towards Universal Health Coverage (Instituto de Salud para el Bienestar, 2020). The objectives for INSABI were "to establish fully funded, integrated public health networks, canceling all private subcontracting" (Gonzalez Block et al., 2020, p. 32); a difficult task with limited planning, transparency, and inexistent guidelines (Human Rights Watch, 2019). Funding issues started to emerge as INSABI contemplated maintaining similar funding, increasing coverage to millions more, and work under severe austerity measures, which highly affected the quality-of-service provision for millions in Mexico (Gonzalez Block et al., 2020). This new approach to healthcare delivery in Mexico raised concerns from national and international public health and human rights experts (Ramirez Coronel, 2020). For instance, in late 2019, Dr. Julio Frenk, public health pundit and former Minister of Health, argued that the lack of guidelines and implementation protocols, the scarcity of training for transition efforts, the recurrent budget cuts, as well as the lack of transparency, will severely limit the system's capacity to achieve and provide high-quality care for millions of citizens and non-citizens (Frenk et al., 2019). Moreover, eligibility criteria to access government-funded services include presenting government-issued documentation, which excludes not only Mexican citizens but also other vulnerable communities, such as distressed migrants who are in transit or resettling in Mexico (Sedas et al., 2020). Likewise, human rights advocate reports express concern over the means to accessing government-issued documentation for migrants; not even members of the Civil Society

have information on how to facilitate this process for incoming migrants (Ramírez, 2020). By 2019–following the federal instruction to defund civil society shelters—accessing any form of care became even more limited for irregular migrants (Rene Leyva-Flores et al., 2015), and with the COVID-19 pandemic in 2020, It became nearly impossible.

4.3 Access to healthcare at a local/international level: NGOs and Civil Society

**The following section contains fragments of a non-peer review Situational Brief published on the website of "Lancet Migration, a global collaboration to advance migration and health" (Sedas et al., 2020)*

The late changes in migration policies have forced migrants into taking more dangerous routes, usually far from trusted networks (Leyva-Flores et al., 2015), many times at the hands of organized crime groups. While a couple of years back, their journey usually took around 95 days, coinciding with the number of days approved by the Mexican government to be eligible for health care at the public health system, current migration policies and disruptions caused by the COVID-19 pandemic have considerably prolonged their journey (Casa Monarca, 2019; Martinez, 2019).

Before 2014, migrants used to travel alongside the train track known as "La Bestia." Knowing this, shelters slowly started to emerge near the train track to ensure that all migrants in transit had access to basic services, shelter, food, legal and medical assistance (see Figure 4).

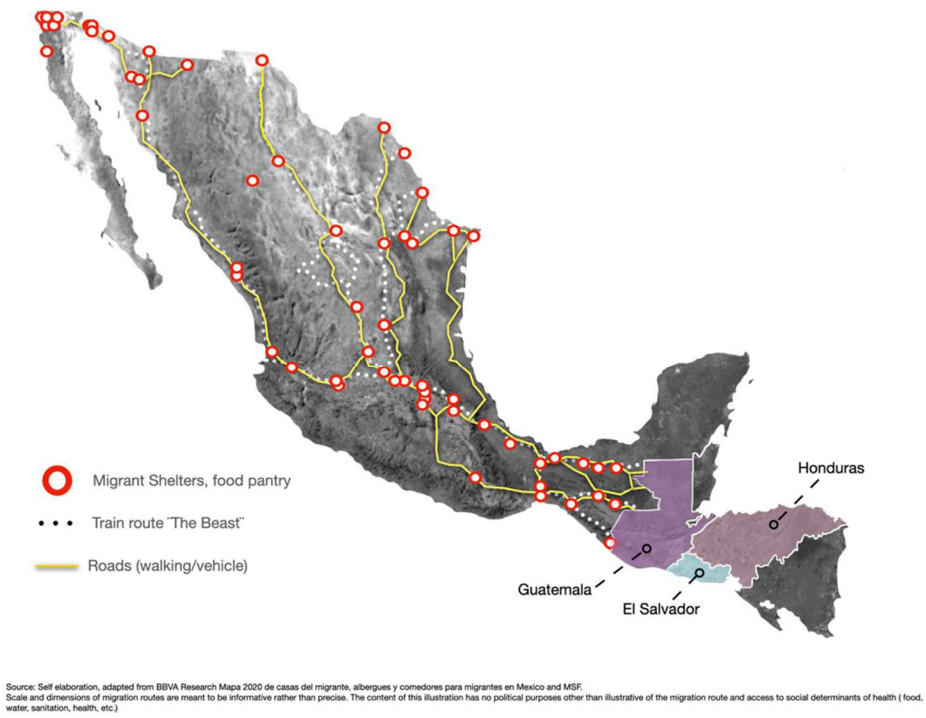


Figure 4. Migration route and access to shelters from Central America to Mexico.

However, in 2014, the *Plan de Frontera Sur*—a bilateral US-Mexico agreement emerging after the U.S pressured Mexico into deterring the irregular influx of unaccompanied Salvadorean migrant children—Mexico deployed 5,000 federal police officers to militarize the train track (*Salvadorans Flee Danger, but Find More of It in Mexico*, 2015). As the flow of migrants into shelters slowly decreased, so did funding. This action has left the civil society and shelters strategically placed along the railroad of *La Bestia*, scattering for provisions and economic resources, unable to maintain humanitarian assistance operations (López Obrador & Ebrad, 2019). In addition, despite the clear confidence distress migrants have on the civil society—evidenced by

the high uptake of health and protection services provided by them—in 2020, the Mexican government decided to relocate funds previously allocated to NGOs as part of the strategy to control migrant flows (Gallégos, 2020). Resources were relocated towards the construction and maintenance of government-managed mega-shelters and detention centers (Vega, 2019). Moreover, more than four million dollars from funds originally designated for Central American aid and development were used to increase deportation efforts and increase militarization at the southern Mexican border (Verza, 2020). As a result of this draconian policy change, civil society care providers and shelters have been largely unable to maintain their prior migrant assistance operations (Ortega, 2020). The limited capacity for shelters to respond to changing migrant needs rarely reached the minimal standards for acceptable humanitarian assistance (Rodríguez, 2019; Sphere Association, 2018). This in part due to limited funding, while receiving more than the average influx of migrants and most families with young children (Rodríguez, 2019).

5. Healthcare for migrant's scenario during COVID-19 pandemic

**The following section contains fragments of a non-peer review Situational Brief published on the website of "Lancet Migration, a global collaboration to advance migration and health" (Sedas et al., 2020)*

Mexico is in a particularly compromised position when it comes to facing the onslaught of COVID-19 because of the high national prevalence of chronic diseases and inequality in access to healthcare (Gallégos, 2020; World Health Organization, 2017). Well before the outbreak of the COVID-19 pandemic, the country had been attempting to cope with a chronically dysfunctional and poorly funded national health system. The health system faced even more dire medical shortages as the pandemic took hold (Noticieros Televisa, 2018; Pradilla, 2020). As discussed before, irregular migrants –all over the world– struggle with access to healthcare. The many barriers experienced by migrants multidimensional and dynamic. Even if health systems are in

place and at capacity, promised universal health coverage under the INSABI programme does not offer sustainable service delivery options for migrants in Mexico. This is illustrated by a civil society representative, interviewed by COLEF in 2020: "In the absence of documentation, access to health has been blocked; those who have the economic agency have gone to private spaces; for others, deficient care is due to their immigration status, and for those who do not have the economic resources, it is more difficult to provide the [medical] service ever since the border closure, [as] volunteer doctors have stopped going to the usual spaces." (Del Monte & McKee, 2020, p. 30)

The COVID-19 pandemic has caused a series of intended and unintended consequences that have provoked vast amounts of unnecessary social suffering. Described by Kleiman and Farmer as the suffering that results from "human problems that have their origins and consequences in the devastating injuries that social force can inflict on the human experience. Social suffering results from what political, economic, and institutional power does to people and, reciprocally, from how these forms of power themselves influence responses to social problems" (Kleinman, Das & Lock, pg. ix). Such social suffering becomes even more pronounced in migrants, refugees, and asylum seekers as the pandemic exacerbates an already dire health outlook for forced migrants in Mexico.

Across the globe, countries are facing unprecedented pressures to uphold their international legal obligations to protect not only the health of their own citizens but the health of the thousands of irregular migrants, asylum seekers, and refugees in their midst (Orcutt, 2021). However, when health care systems are overwhelmed by a health crisis such as this one, the health of migrant populations might be further jeopardized (Kluge et al., 2020); this is the case in Mexico. Migrants living in overcrowded and unsanitary conditions, as so many are, struggle to abide by physical distancing or sanitary self-protection strategies. And popular fear and suspicion exacerbate already

latent xenophobic tendencies. The UNHCR has stressed the vital importance of including migrants and refugees within national health system strategies by including these populations in measures that deliver prevention, testing, and treatment. Incorporating migrants' and local actors' experience into the national strategy not only protects their rights to access equitable care but also lowers the rates of viral transmission for themselves and others (UN High Commissioner for Refugees (UNHCR), 2020). However, governments' efforts to open dialogues with ´gate keepers´ remain low (Gallégos, 2020). Internationally accepted guidelines highlight the importance of testing and isolating individuals positive to the COVID-19 virus or who have been exposed to people who have tested positive (UN High Commissioner for Refugees (UNHCR), 2020; World Health Organization, 2020b).

In efforts to counter the unintended consequences of governments' exclusion of migrant's health, members of the international and civil society took measures into their own hands. Recommendations pertaining to closed spaces, such as shelters, included the establishment of clinical case definitions as filters to identify suspected cases, the transfer of high-risk individuals to less crowded areas, and maintenance of ´social distancing´ recommendations within dorms, dining rooms, and bathrooms. This was particularly difficult for underfunded and overcrowded shelters. In Tijuana, Baja California, the most stressing issue affecting operations has been influenced by the suspension of volunteer work and regular donations from private funders (Del Monte & McKee, 2020); for other shelters, requesting support by international NGOs such as MSF has been the only alternative (Del Monte & McKee, 2020; Médecins Sans Frontières, 2020). The fear of an inevitable syndemic in migrant populations in Mexico has been voiced ever since the start of COVID-19 in Mexico, as well as the negative impact of the disruption of care as usual. As expressed by a civil society representative interviewed by COLEF with regard to HIV, "we believe

that during this pandemic there may be greater exposure to HIV, as well as other sexually transmitted infections (STIs). Many HIV and STI prevention activities have had to stop for the moment since, without the appropriate protective equipment to prevent COVID-19 infections, it can be dangerous for both users and staff to carry out this type of interaction" (Del Monte & McKee, 2020, p. 20). As we have seen with Abelino's case, the same has been true for TB care in Chiapas.

Despite Mexico having signed and ratified international agreements and treaties that state the right to health for all people, migrants are only partially considered in national health policies and the actual health care services delivered. According to COLEF, migrants' access to healthcare provided by federal or state actors during the COVID-19 pandemic has been scarce, sporadic, and heterogeneous (COLEF, 2020; Sedas et al., 2020). Local actors have noted the lack of staff, "stuff" (personal protection equipment), space for shelter, quarantine, and isolation, as well as systems (coordination and rapid response by the local health governance) and active epidemiological surveillance - the so-called "five Ss" described by the prominent public health expert Paul Farmer (Farmer & Mukherjee, 2014; Sedas et al., 2020).

Under the new provisions instituted to address the COVID-19 pandemic, shelters across Mexico were obligated to restrict access to incoming migrants. Meanwhile, only limited resources were available to quarantine migrants who are ill or have been exposed to the virus. By the end of March 2020, three shelters situated in Coahuila and Chiapas—states with a high migrant concentration--had temporarily closed their operations. In Tijuana, Monterrey, and Matamoros, shelter operations were severely limited, compromising their ability to follow the WHO and MOH guidelines (Mariscal, 2020; Reina, 2020; Rios, 2020) and continue to provide humanitarian assistance (Sedas et al., 2020). In a recent report published by COLEF, NGO's and members of

the civil society described what it was like in the field: “In Tijuana, under the argument of channeling deportees to the Centro Integrador del Migrante "Carmen Serdán" (on which it has been very difficult to obtain information [about and from]), the federal government has not supported shelters that are containing the migrant emergency in the face of the COVID-19. Except for some local considerations, government measures have proven insufficient to address the problem linked to the migrant population and COVID-19, which represents an omission of its obligation to protect the human rights of people in a situation of mobility. ” (Del Monte & McKee, 2020, p. 38)

According to a recent survey (n=212) of refugees and irregular migrants conducted in both Guatemala and Mexico between July 13, 2020, and August 29, 2020, almost nine out of ten respondents reported needing additional assistance during the COVID-19 pandemic (Mixed Migration Centre, 2020). Fifteen percent reported needing access to health services, 22% psychological assistance, 40% shelter/housing as well as food and cash (76% and 68% respectively). Overall, the medical needs of migrants were more acute for those in Mexico compared to Guatemala (33% versus 3%). Moreover, consistent with previous reports (Rene Leyva-Flores et al., 2015), the study showed that, during the 2020 pandemic, 81% of study participants in both countries reported receiving care in NGO’s/shelters, two out of ten from international NGOs, and “virtually no respondent had received assistance from the authorities of the host country.” (Rene Leyva-Flores et al., 2015; Mixed Migration Centre, 2020, p. 4)

5.1 *Del dicho al hecho hay un gran trecho* [from saying to the fact there is a long way]

There is a very famous saying in Mexico: “*del dicho al hecho hay un gran trecho*” - often times referring to the abyss between actions and words. From political promises to alleviate

suffering to actual sustained and equitable change, there is quite an abyss filled with a lack of political will, corruption, biopower, and accountability. I personally am not an expert when it comes to international law, but I do know the power of a country's word and the impact on a person's body. For migrants in Mexico, limited agency and options to claim, receive and protect their right to healthcare worsens their health outcomes. In Mexico, Article 8 of the Migration Law contemplates "Migrants will have the right to receive any type of medical care, provided by the sectors public and private, regardless of their immigration status, in accordance with the legal provisions and applicable regulations .... Migrants, regardless of their immigration status, will have the right to receive in a free of charge and without any restrictions, any type of urgent medical attention that is necessary to preserve your life" (Ley de Migración, 2011).

Looking back at all of the relevant international treaties and agreements Mexico has signed and ratified, particularly those specific to migrants right to access healthcare in Mexico, an obvious thing comes to mind: Mexico has the legal obligation to protect, respect, and fulfill access to healthcare for citizens as well as for migrants, asylum seekers, and refugees. However, *del dicho al hecho hay un gran trecho.* Mexico takes pride in its international commitment towards health and human rights (Belmont & López, 2018; López Obrador & Ebrad, 2019); still, it took Mexico fifteen years to ratify the International Covenant for Economic, Social and Cultural Rights (ICESCR) and two more years to implement it in the Mexican Constitution (Art. 4) (Secretaría de Salud, 2014). Twenty-eight years passed, and Mexico was only bringing forward their explicit commitment to include access to healthcare, as well as the guarantee to enjoy all rights recognized in their constitution –including all treaties and agreements Mexico signed and ratified– for *all people* (Art. 1) (*Constitución Política de Los Estados Unidos Mexicanos*, 1917). Notwithstanding, major discrepancies exist between theory and practice– *del dicho al hecho*– towards the right to

the protection of health (UN Economic and Social Council, 2000). For migrants in Mexico, their right to access health and social services was not respected until 2014, 33 years following Mexico's commitment to "respect, protect and fulfill" the right health for citizens and non-citizens alike, as stated in the General Comment No. 14 (UN Economic and Social Council, 2000). In theory, Mexico agreed to carry out these three main duties—respect, protect and fulfill—ensuring that health services are available, accessible, acceptable, and of good quality (UN Economic and Social Council, 2000). The first commitment was to *respect,* which elude to refraining from denying or limiting equal access to health—migrants included; the second was to *protect,* in which States must not only recognize the right to health but must design and implement strategies, policies, and programs aimed at realizing such health; and lastly, to *fulfill,* which is aimed at identifying vulnerable individuals—migrants such as Abelino—more at risk of not being able to realize their right to health (UN Economic and Social Council, 2000). Moreover, the obligation to *protect, respect, and fulfill* applies to all human rights; this includes the right to prevention, treatment, and control of epidemics such as TB, HIV/AIDS, and COVID-19 [Article 12.2 (c)]; the obligation to create "conditions in which the right to health is achieved equally and appropriate to the needs" (Article 12.2) by ensuring access to health facilities, goods and services (UN Economic and Social Council, 2000).

According to Health and Human Rights expert, Jonathan Mann, modern human rights include the "rights of individuals; these rights inhere in individuals because they are human; they apply to all people around the word; and they principally involve the relationship between the state and the individual" (Mann et al., 1994, p. 10). This means that migrants, regardless of where they are from, where they are traveling or where they will be resettling, have these inherent rights too. Then why the need to sign and ratify commitments and treaties? Paul Hunt, the former Special

Rapporteur for the right to health, described the important relationship between treaties, human rights, and States' responsibilities. Furthermore, Hunt elaborated on the importance of General Comments to support the UN human rights treaties and the adherence to them through general comments and recommendations in the form of clarification and legal implementation strategies (Hunt, 2016).

As mentioned above, the idea that *all humans* have the inherent right to living a healthy life with dignity had to be clarified to provide guidance to signatory States. To this argument, Dr. Knipper challenged the general idea of such documents to hold power over protecting or improving the health and well-being of *all people*, especially those on the move. Knipper's central argument in "Migration, public health, and human rights" was to explore the consequences of lack of government accountability to human rights standards as the right to health "explicitly transcends access to health care." (Knipper, 2016, p. 994). This is where the General Comment comes into play. The General Comment No. 14 was written following a long series of academic discussions – most of them pioneered by Jonathan Mann and colleagues at the Harvard Francois Xavier Bagnoud Center for Health and Human Rights. In 1994, colleagues explored the gaps between theory and practice within the ICESCR interpretation of Art. 12 (Harvard Law School & François-Xavier Bagnoud Center for Health and Human Rights, 1995; Hunt, 2016; Mann et al., 1994). The essence within academic discussions was focused on ways in which the ICESCR Art. 12 could be implemented by governments (Harvard Law School & François-Xavier Bagnoud Center for Health and Human Rights, 1995).

To this point, the ICESCR designated a general committee that developed a series of legally binding ways in which governments must protect, respect, and fulfill the right to health (UN Economic and Social Council, 2000). This was the first time the right to health was described as a

way to bring health equity to *all people* – including irregular migrants (UN Economic and Social Council, 2000). The general comment included a "minimal list of specific norms and standards to facilitate the operation of a rights-based approach: availability, accessibility, acceptability, and quality (collectively known as AAAQ), participation, non-discrimination, transparency, and accountability" (Hunt, 2016, p. 115). However, realizing the right to health requires more than a rights-based approach; it requires commitment, funding, and accountability measures. Former Special Rapporteur Hunt highlighted that it was "unrealistic to expect health policy makers or practitioners to read either a treaty provision or its corresponding general comment and then grasp how they are to operationalize the right to health" (Hunt, 2016, p. 116). This challenge persists twenty years after the clarification on what is the right to health and is currently affecting millions of migrants during the COVID-19 pandemic.

Following the line of discussion, it is very clear that Mexico's commitment towards protecting, respecting, and fulfilling the right to health has been fully or partially failing to meet the needs of migrants. As for Abelino, did Mexico protect, respect, or fulfill his right to access TB prevention, treatment, or any health service at all? Or did Abelino's access to healthcare was a reflection of Mexico's failure to ensure the right to health for someone else (the patient lost to follow-up whose medication was given to Abelino)? Box 1 depicts the elements of General Comment 14 that Mexico has an obligation to guarantee so that individuals like Abelino have their inherent right to health respected, protected, and fulfilled.

Box 1. Excerpts from the General Comment No. 14 legal obligations towards participating States to protect, respect, and fulfill the right to health for those suffering from TB and other infectious diseases such as COVID-19 (highlighted in **bold).**

Article 12.2 (c): The right to prevention, treatment, and control of diseases "**The prevention, treatment, and control of epidemic, endemic, occupational and other diseases"** (art. 12.2 (c)) requires the **establishment of prevention and education programmes** for behaviour-related health concerns such as sexually transmitted diseases, in particular HIV/AIDS, and those adversely affecting sexual and reproductive health, **and the promotion of social determinants of good health, such as environmental safety, education, economic development, and gender equity**. (UN Economic and Social Council, 2000, p. 7).
Article 12.2 (d): The right to health facilities, goods, and services "The **creation of conditions** which would **assure to all medical service and medical attention in the event of sickness"** (art. 12.2 (d)), both physical and mental, includes the **provision of equal and timely access to basic preventive, curative, rehabilitative health services and health education; regular screening programmes; appropriate treatment of prevalent diseases, illnesses, injuries, and disabilities**, preferably at the community level; the **provision of essential drugs**; and appropriate mental health treatment and care" (UN Economic and Social Council, 2000, p. 7).
"With respect to the right to health, **equality of access to health care and health services have to be emphasized**. States have a **special obligation to provide those who do not have sufficient means with the necessary health insurance and healthcare facilities** and to prevent any discrimination on internationally prohibited grounds in the provision of health care and health services, especially with respect to the core obligations of the right to health.16 Inappropriate health resource allocation can lead to discrimination that may not be overt. For example, **investments should not disproportionately favor expensive curative health services which are often accessible only to a small, privileged fraction of the population**, rather than primary and preventive health care benefiting a far larger part of the population" (UN Economic and Social Council, 2000, p. 8).

All Mexican health policies that include migrants explicitly mention the treaties and agreements that have been discussed above as part of the legal framework. However, migrants are explicitly excluded from health care services when their implementation and delivery fail to consider their specific context (i.e., not having proof of residence). One example of how this plays out is the National Comprehensive Healthcare Plan for the Migrant Population (*Plan Integral de Atención a La Salud de La Población Migrante*, 2019). The theoretical framework of the entire 60-page document describes the guiding norms on human-rights based access to healthcare for migrants 2018-2024 states:

> In this sense, the national health policy in immigration matter recognizes the universal character of Human Rights and reflects it in their national legal systems: the Political Constitution of the United Mexican States, the General Health Law, the Migration Law, state health laws; which are aligned to the treaties to which the Mexican State is a part, such as the Universal Declaration of Human Rights, the 2030 Agenda for the Sustainable Development, the New York Declaration for Refugees and Migrants, the Global Compact for Safe, Orderly and Regular Migration and the WHO resolution on promoting the health of refugees and migrants. (Plan Integral de Atención a La Salud de La Población Migrante, 2019, p. 15)

5.2 Access to TB care for migrants under the National Comprehensive Healthcare Plan for Migrant populations

Whilst the document clearly shows Mexico's consideration to care for all evolving and chronic health needs of migrants, asylum seekers, and refugees, it fails to describe several essential questions: how, how much, for how long, for how many, who will do it and how it will be paid for. This lack of funding clarification, of clearly designed and migrant informed pathways to care, and of mechanisms for program monitoring, evaluation and accountability, left Abelino with no other options but to ask for a glass of water while waiting for death to come.

Dr. Martha Arrieta clearly explained Abelino's case as an outlier, not only because he is a migrant but because he was diagnosed and received comprehensive care and accompaniment in Chiapas. Abelino's journey to care started while living in Chiapas, Mexico, one of the poorest states in Mexico and one deeply affected by COVID-19. As discussed in the previous section,

Mexico is both internationally and constitutionally bound to recognize the right to access TB and other forms of care for Abelino and all other migrants in transit or resettling in Mexico. Chiapas, Mexico, has one of the highest burdens of TB, 24.7 per 100,000 compared to 17.3 per 100,000 national average and the first stage of people's migration journey in Mexico. Access to healthcare in Chiapas has been one of many challenges; health infrastructure is underfunded and/or distant for most rural living individuals (Pérez-Molina et al., 2020b).

To this point, Perez-Molina and colleagues sought to evaluate access to TB care in Chiapas, Mexico using the AAAQ framework introduced with Commentary N.14 to explore whether access to the most surveilled disease in the world is "Available, Acceptable, Approachable and of Quality." In short, *del dicho al hecho:* Researchers found a clear divergence between Mexico's commitment to health as a human right (specifically TB care) and the concrete available, acceptable, affordable/approachable, and quality of goods and programs provided by the federal/local government. Hospitals lacked TB and HIV testing and monitoring resources and little to no financial support for indirect incurring cost – despite the service being promoted as free (Pérez-Molina et al., 2020b). Their conclusion highlighted key gaps between words and practice, law and implementation, and human rights versus outcry violations without formal accountability measures and displacement of responsibility. The March 19, 2021 event is a case in point.

During a live press briefing, the head of the ministry of health in Mexico City updated in an open press briefing the status of BCG vaccines in Mexico– a year after absolute scarcity and no immunizations within the private and public sector (World Health Organization, 2020). The ministry of health displaced responsibility on live television and blamed such scarcity on global and national shortages (Vega, 2020). The WHO lead TB Specialist, Tersa Kasaeva, quickly clarified on global communication platforms. Kasaeva –during a live WHO press brief – responded

to Mexico by stating that there are no global shortages of BCG and that the scarcity experienced by Mexico must be due to "local circumstances" (Unidad de Inteligencia Epidemiológica y Sanitaria de la Ciudad de México, 2021).

In 2019 alone, Mexico reported under 80% BCG immunization coverage while 1,500 children were diagnosed with TB (*Stop TB Partnership*, 2021a). Testing for both COVID-19 and TB was shockingly low in Mexico. According to a New York Times article published in August 2020, TB diagnosis fell to 263 cases compared to 1097 registered cases in 2019 during the same week. Executive director for Medical Impact highlighted how in Mexico "no one is testing for tuberculosis in any institution," similar to what Dr. Arrieta had mentioned; "The mind of the doctors in Mexico, as well as that of those who make decisions, is fixed on COVID-19" (Mandavilli, 2020). To this analysis, one might wonder: did Abelinos' delayed diagnosis be a consequence of lack of political will, funding, contact tracing, systems designed to address social determinants of health, or was it something more than that? What if Mexican Abelino had TB? Would he be diagnosed and treated while in transit through Oaxaca? If access to healthcare is limited to Mexicans within their known setting, what is to expect of migrant populations on the move with little to no economic agency, heightened exposure to violence, health risks, and no social support/networks?

The first part of this thesis introduced migration as a social determinant of health, a determinant that is often denied by a series of social and structural forces. Abelino's story came to illustrate how many challenges – economic, logistical, social, political, cultural, linguistic, etc. tamper with the right to health. However, as the story of the second Abelino – which was absolutely serendipitous – illustrated, social suffering is all around us; it is part of our history, our country's colonial past. Abelino had no way of escaping the history of mass murder, displacement, violence,

and fight for social justice; Abelino had his feet to walk, his hands to work, and hope for a better future. In 2020, there were 280.6 million people, like Abelino, who lived outside of their country of origin (Migration Data Portal, 2020). All humans, regardless of where they were born in, their sex or gender, their political or religious beliefs, have the right to have rights. However, an additional layer of difficulty is added when you add the variable of movement from one location to another, from a country's high GINI index to another, from one constitution to another. Throughout this writing, we slowly revealed the complexity of addressing migrant's health, as it is dynamic, multidimensional, and quite personal. We used TB in Mexico as an exercise to identify the intersectionality between global health, social medicine, human rights, and migration from a syndemics perspective. However, the situation experienced by Abelino, unfortunate as it might be, is currently shared amongst millions of irregular migrants, asylum seekers, and refugees across the globe, despite global commitments to ´leaving no one behind´ (World Health Organization, 2020a). Part 2 of this thesis will exemplify the lived experience of people on the ground who struggle to uphold the right to health for those on the move. We discuss three case studies that illustrate diverse populations, geographic and political historical roots of social inequality, and shared important migration patterns. All three cases involving Syrian internally displaced migrants, South Africa's economic and circular migration, and Peru's case of poverty and State failure influx of migrants during a pandemic of syndemic proportion.

I encourage you to go beyond the text and question every policy, commitment, test, health system response from a historical, biosocial, geopolitical, and economic perspective – such as the exercise with Abelino– to slowly connect the dots between *dicho y hecho* in a world where access to migrant health is highly politicized.

Part 2: The need for protecting and enhancing TB health policies and services for forcibly displaced and migrant populations during the ongoing COVID-19 pandemic

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6. Abstract

Disruption of health services due to the COVID-19 pandemic threatens to derail progress being made in tuberculosis control efforts. Forcibly displaced people and migrant populations face particular vulnerabilities as a result of the COVID-19 pandemic, which leaves them at further risk of developing TB. They inhabit environments where measures such as "physical distancing" are impossible to realize and where facilities like camps and informal temporary settlements can easily become sites of rapid disease transmission. In this viewpoint, we utilize three case studies from Peru, South Africa, and Syria to illustrate the lived experience of forced migration and mobile populations and the impact of COVID-19 on TB among these populations. We discuss the dual pandemics of TB and COVID-19 in the context of migration through a syndemic lens to systematically address the upstream social, economic, structural, and political factors that - in often deleterious dynamics - foster increased vulnerabilities and risk. Addressing TB, COVID-19, and migration from a syndemic perspective not only draws systematic attention to comorbidity and the relevance of social and structural context but also helps to find solutions: the true reality of syndemic interactions can only be fully understood by considering a particular population and bio-social context and ensuring that they receive the comprehensive care that they need. It also

provides avenues for strengthening and expanding the existing infrastructure for TB care to tackle both COVID-19 and TB in migrants and refugees in an integrated and synergistic manner.

7. Introduction

The disruption of health services globally due to the COVID-19 pandemic threatens to derail the limited progress being made in achieving UN End TB targets. There are particular vulnerabilities that forcibly displaced people and mobile populations face as a result of the pandemic, which leaves them at risk of TB as a hidden "collateral damage" (Neal, 2020). These vulnerabilities often result from being overlooked or actively excluded from health and social policies, but also from inhabiting environments where measures such as "physical distancing" are impossible to realize, such as in camps or informal settlements. For this reason, migrants and mobile populations are key communities for TB prevention and control (Dhavan et al., 2017) and, as reiterated in a recent statement from the International Union Against TB and Lung Diseases Tuberculosis and Migration working group, should not be neglected during the COVID-19 epidemic (The Union, 2020). In fact, rather than the diversion of resources away from TB services, the current infrastructure for TB care can be strengthened and expanded to tackle both COVID-19 and TB in migrants and refugees in an integrated and synergistic manner. In this viewpoint, we discuss the dual pandemics of TB and COVID-19 in the context of migration through a syndemic lens (Shrinivasan et al., 2020; Willen et al., 2017; Zvonareva et al., 2019) to systematically address the upstream social, economic, structural and political factors that—in often harmful dynamics—foster increased vulnerabilities and risk.

8. TB, COVID-19, migration and the multiple layers of syndemic vulnerability

The COVID-19 pandemic has had multiple effects on all aspects of TB: increased rates of disease and risk for key populations; disruption of diagnosis, access to preventive treatment for those infected with the mycobacterium, and therapy for those with active disease; and unchecked medical, social and economic consequences of the disease for patients, families, and communities. Confinement measures and economic lockdown disproportionately affect the poorer sectors of society with a negative impact on multiple well-known determinants of TB infection, including housing and nutrition. Low pay workers and those making their living in the informal sectors are more likely to be exposed to both TB and COVID-19 as they are unable to "stay at home." Since COVID-19 and TB are both airborne diseases with respiratory symptoms that spread in the places where people live and work, synergies can be assumed at multiple levels. While the biological and immuno- logical interactions are still not sufficiently understood, the social dimension is clear. Adding mobility to the equation adds further layers of complexity.

The strain on health policies and services due to the pandemic interfere with all three dimensions of the comprehensive approach to combat TB (Keshavjee et al., 2015; Reid et al., 2019): active case finding, treatment of all types of TB, and preventive therapy. These approaches depend on well-organized and funded systems, with strong ties into the communities and mechanisms for providing therapeutic support and social support to help the sick complete their treatment. Even before the pandemic, migrant groups were more difficult to reach (Dhavan et al., 2017; Lönnroth et al., 2017). Lack of social inclusion in local communities and actual, expected, or intended mobility make community health approaches difficult to realize. Some migrant communities may be hidden, invisible, or for multiple reasons out of the reach of public health services, with lack of entitlements, trust, or economic reasons being further barriers. Each phase

of the migration process entails different patterns of risk and barriers to care (Dhavan et al., 2017; cf. Wild et al., 2017), with discrimination and other human rights violations fostering syndemic vulnerabilities (Willen et al., 2017).

The pandemic dramatically disrupted the already complicated situation of many of the approximately 1 billion people who are on the move worldwide. Within this group are economic migrants, those who have been forcibly displaced (including internally displaced who have not crossed an international border, as well as refugees or asylum seekers), and those who have been trafficked (cf. Dhavan et al., 2017). In addition, confinement measures and border closures have left many stranded. For example, low-wagelabour migrants in the informal economy ffind The level of health risks experienced by migrant and mobile populations depends on multiple, intersecting layers of social vulnerability (e.g., economic, political, social) interacting with biological and medical dimensions of both the virus and the host. The following case studies illustrate the different types and realities of forced migration and mobile populations in Peru, South Africa and Syria, and the synergy between COVID-19 and TB among these populations.

9. Case Studies

9.1 Peru

Venezuela's deteriorating situation saw over 5 million Venezuelans flee to other Latin American and Caribbean countries and beyond. This has become one of the largest displacement crises in the world. Peru is one of the countries that has hosted the most Venezuelans – over one million between 2014 and the end of 2020 – comprising mainly distressed families fleeing chronic impoverishment and life-threatening living conditions (RV4, 2020; United Nations High Commissioner for Refugees, 2020a). The majority of arrivals are families in vulnerable conditions

who remain without documentation or permission to remain in Peru, directly affecting their access to fundamental rights such as healthcare. This situation exacerbates the perils that many Venezuelan's faces and leads to a state of extreme precariousness characterized by food insecurity (200,000 migrants) (United Nations High Commissioner for Refugees, 2020b), loss of employment (89%), risk of eviction (39%), homelessness, or being forced to return home (Defensoría del Pueblo, 2020). These factors markedly increase this community's risk of exposure to communicable and non- communicable diseases (NCDs).

Peru's TB incidence is 119 per 100,000 in the setting of low HIV prevalence, registering 31,764 new cases in 2019 (World Health Organization, 14 October 20202). National survey data indicate that 7.3% of patients with TB and no prior treatment were infected with multidrug-resistant strains of the mycobacterium(Quispe et al., 2020). After the declaration of a national emergency over COVID-19, the Peruvian Ministry of Health (MoH) focused on responding to COVID-19 while limiting other health services. The result, the MoH estimated, would be that 9,000 individuals with TB would remain undiagnosed (Americas TB Coalition, 2020; World Health Organization, 14 October 20202). Since March 2020, the health system has suffered from staff and resource shortages resulting from this redistribution. As a result, even those individuals and families who are diagnosed with TB infection and disease are unable to access care, largely due to changes in the supervision of TB drug administration, TB center visits, absence of complementary laboratory tests, and lack of a strategy to deliver comprehensive TB care (Corresponsales clave, 2020).

In the last five years, the MoH has noticed an increase in the number of TB cases amongst migrant populations, from 4 cases (2015) to 245 (2019) and 121 (1st quarter 2020) - mostly comprising refugees from Venezuela (82%) (Rios, 2020). While these numbers are quite high, it

is estimated that underdiagnosis among Venezuelan migrants is greater than amongst the Peruvian population since most Venezuelans remain undocumented with no access to health or social protection. As the burden of TB remains stable with severe limitations to detect, refer and treat susceptible individuals, migrant communities may suffer the consequence of not having a diagnosis or access to preventive, curative, or long-term care. Since the second quarter of 2020, adaptive efforts to ensure continuity of care for TB have been implemented by the Peruvian MoH. Such initiatives include virtual monitoring, telemedicine, and special hours for consultation; however, the degree of utilization remains unknown (Ministerio de Salud del Perú, 2020a). Though the treatment of TB is free in Peru, undocumented migrants first need to absorb testing costs; this, in turn, leads to delays in initiation of treatment and ultimately results in increased transmission in their families and communities.

Some ongoing actions have emerged; one example is the TB Elimination Initiative in Lima, Peru, led by the MoH and the NGO Socios En Salud (SES), which is designed to actively find cases of TB in the community (Ministerio de Salud del Perú, 2020b). From August to December 2020, SES deployed x-ray vans fitted with artificial intelligence readers in high-risk communities, screening 4500 at-risk individuals and identifying 50 patients with active TB. Additionally, during 2020, this initiative identified and referred 20 Venezuelans to treatment and continuity of care. However, these activities have not continued apace because of the lock-down measures, resulting in a missed opportunity to screen or detect TB among patients with possible COVID-19, both of whom present with cough and other respiratory symptoms. SES's forthcoming data reports an incidence of TB cases of 1,587 per 100,000 among possible COVID-19 patients who present with a cough. These findings suggest that screening patients who demonstrate COVID-19 symptoms present an opportunity to detect active cases of TB (Tovar et al., 2020).

9.2 South Africa

South Africa (SA) has made tremendous gains to combat TB over the last decade, despite having one of the world's worst HIV epidemics (Keene et al., 2020; Reniers et al., 2017). Yet these gains are threatened by the ongoing COVID pandemic (National Institute for Communicable Diseases, 2020), which, by the end of January 2021, accounts for close to around 1.5 Million cases detected and more than 40.800 deaths (National Institute for Communicable Diseases, 2021). Furthermore, even though specific data is largely lacking, migrants, like those working in the mining industry (Harrisberg, 2020), as well as refugees, asylum seekers, and undocumented (Mukumbang et al., 2020), are likely to be at the highest risk for suffering the increased vulnerability related to the co-occurrence of TB and COVID-19.

Because of the national COVID crisis, South Africans have faced a nationwide disruption of routine service provision (Keene et al., 2020). South Africa saw a significant drop in the number of TB tests performed during Level 4 and 5 lockdown (March 27-May 31). The National Institute for Communicable Disease released a report on May 10, 2020, citing a 48% decrease in the number of genetic tests for TB nationally, from a weekly average of 47,520 prior to lockdown to a weekly average of 24,574 over the first seven weeks of lockdown (National Institute for Communicable Diseases, 2020). Concerning underreporting, the National Department of Health lead director of HIV, TB, and Drug-resistant TB, Dr. Norbert Ndjeka, stated: "During quarter one of 2019 we registered 2506 DR-TB patients on treatment; quarter one of 2020 reflects 1013 DR-TB patients" (Cleary, 2020). Considering the estimated number of 3 to 4 million international migrants living in South Africa (Garba, 2020; UN DESA, 2020), scaling down TB interventions in this setting will have a severe impact.

Moreover, national lockdown and containment measures have exposed many system-level challenges facing immigrant com- munities in accessing healthcare and social programs. The

impact on the living and working conditions of migrants has been particularly hard for already vulnerable groups, including refugees, undocumented, homeless, and those living in informal settlements (Garba, 2020; Keene et al., 2020; Mukumbang et al., 2020). The central government's strategies to alleviate economic hardship, such as a temporary increase of social support and child grants and a COVID-19 Social Relief of Distress grant or tax subsidies for small businesses, are largely not available for migrants (Business Insider South Africa, 2020). Similar to other countries, the pandemic reveals pre-existing flaws and gaps in social and health policies for those with the highest risk of being left behind.

COVID-19 has resulted in monumental disruptions to diagnosis, treatment initiation, and support efforts for TB patients in South Africa. However, there are many examples where municipalities and local leaders responded urgently to the health and social needs of its most vulnerable during the lockdown. Cities across South Africa set up temporary shelters to provide safe sleeping spaces for homeless individuals during the crisis. This was both to protect people living on the streets from COVID-19 and to reduce community transmission. The coordinated efforts amongst local city officials, NGOs, law enforcement, the military, the Department of Social Development, and the private sector showcased incredible solidarity amidst a national epidemic to protect and care for the needs of vulnerable groupings, many of whom are migrants. However, the lack of supportive policies and programs, as well as stigma and discrimination directed toward undocumented migrants, are still undermining the success of such efforts. For a sustainable approach to stop TB and COVID-19, the vicious circle of mutually reinforcing social, economic, and political drivers of vulnerability has to be addressed systematically, with particular attention to migration.

9.3 Syria

Of Syria's 22 million pre-conflict population, more than half have been forcibly displaced from their homes; 5.5 million live as refugees in neighboring countries, and 6.1 million are internally displaced (OCHA, 2020b). As the country approaches almost a decade of conflict, it is increasingly divided with at least four different regions of geopolitical control arising with different forms of political power, health systems, governance, and leadership (OCHA, 2020a)For those who have been forcibly displaced (either as Internally Displaced People/IDPs or refugees), their living conditions – aggravated by forced migration – has left them at increased risk of both TB and COVID-19 (OCHA, 2020b). Factors exacerbating vulnerabilities for particularly the most marginalized of these forcibly displaced populations include overcrowding, inadequate shelter with poor ventilation, and poor access to healthcare, water, sanitation, and hygiene (OCHA, 2020a).

Different geopolitical regions within Syria have differing capacities and strategies to respond to COVID-19 with varied financial and technical support from external organisations like the World Health Organization (WHO) and humanitarian organisations. Communication and collaboration between these areas are limited, with important consequences for public health measures. The heterogeneous preparedness and response strategies in the politically divided country have contributed to the rapid spread of SARS-CoV-2 among Syrian populations. Under-testing and under-reporting of official figures, particularly in areas under government control, is widespread and exacerbates the uncontrolled spread of the virus. This vastly underestimates the true burden of COVID-19 and its devastating effects on healthcare workers, the health system, and the population (OCHA, 2021). In many ways, COVID-19 under-reporting mirrors TB under-reporting in Syria both before and during the pandemic, where official estimates declared by the

government are thought not to be representative of the actual burden of TB. Official estimates for the incidence of TB as declared by the government are 19 per 100,000 in 2019 (The World Bank, 2019), of which 8.8% are multidrug or rifampicin-resistant. However, this figure has changed little since 2017, despite the conflict, during which ongoing attacks on healthcare have forced the displacement of TB and laboratory specialists and adversely affected diagnostic infrastructure and healthcare access for patients (Abbara et al., 2020). The figure is likely a vast underestimate, especially for areas outside of government control where the National TB Program is not active.

Similar to other healthcare services, TB services across Syria vary considerably. The National TB Programme (NTP) in Syria led to the provision of TB services across the country before the onset of conflict; however, since the conflict, the NTP predominantly serves government-controlled areas (Abbara et al., 2020). To address existing gaps in service delivery in areas outside government control, around northwest Syria, the Gaziantep-based, WHO-led health cluster established a TB response unit to re-activate the TB service provision in the area. Since its inception in 2019, 785 cases of TB have been diagnosed between July and December 2020, including 15 people infected with multidrug-resistant strains of TB (Abbara et al., 2018). Despite the best efforts of this unit, COVID-19 has adversely affected case finding, contact tracing, and TB management across Syria in a number of ways: patients are reluctant to seek medical care for reasons including the risk of nosocomial transmission of SARS-CoV-2; high-security risks exist, especially as targeted attacks on the healthcare system continue; and there are insufficient numbers of healthcare professionals or TB specialists, and, as in many parts of the world, remaining specialists have been requested to support COVID-19 services. This has contributed to a reduction in working hours in the TB centres and limitations on active case finding or contact tracing activities to minimize the spread of SARS-CoV-2. To mitigate the harm of service disruption, there

have been various adaptations to the delivery of TB services. For example, in northwest Syria, there has been increased use of home visits to support patients to finish their treatment and monitor for side effects, and there has been increased collaboration between the COVID-19 task force in northwest Syria and EWARN (Early Warning and Response Network) to support testing and surveillance of SARS-CoV-2 among newly diagnosed TB patients.

Given the redirection of resources to respond to the COVID-19 pandemic, collaborative responses as has been utilized in northwest Syria are key to addressing both these pandemics. To address the particular vulnerabilities which increase the susceptibility of the most vulnerable forcibly displaced populations in Syria to both TB and COVID-19, a multi-pronged approach is urgently needed which not only addresses the social determinants of health but also supports healthcare access, ends the ongoing attacks on healthcare, and ultimately aims to end the broader conflict which impacts on the civilian population within Syria, including those forcibly displaced.

10. Conclusions

The case studies from Peru, South Africa, and Syria illustrate how local and regional contexts shape the patterns of risk and vulnerability related to COVID-19 and TB, as well as the capabilities of health policies and systems to protect and care for the population. While the social, economic, structural, and political determinants of health that work synergistically with biological factors to define the course and impact of any pandemic may vary according to place and time, the basic underlying pattern remains consistent: political conflict or neglect, weak public health services, and the inability or unwillingness to provide comprehensive diagnosis, treatment, and prevention to those most at risk of disease. This translates into elevated disease burden and infection for TB, COVID-19, and many other conditions.

Even before the current pandemic, global efforts to end TB were off track (Reid et al., 2020). But the deleterious effect of the syndemic scenario of COVID-19 and TB is likely to be even greater in the case of mobile populations due to additional layers of risk related to migration contexts. Even in low-incidence countries, migrants are at elevated risk for the development of TB (Lönnroth et al., 2017) and COVID-19 (Lancet Migration, 2020). Within the migrant populations, some groups are at even greater risk: undocumented migrants or those internally displaced are often excluded from regular health systems, including TB programs, for legal, political, and other social-structural reasons. And while health and social policies tend to ignore migrant populations, restrictive migration policies aimed at deterring migration create environments where people are stranded or forced to live in precarious conditions for extended periods of time in camps and informal settlements (Martinez-Juarez et al., 2020) (Martinez-Juarez et al., 2020). The notorious situation of refugees and migrants in Libya, on the Greek islands, or between the borders of Honduras, Guatemala, Mexico, and the United States, are telling examples (Orcutt et al., 2020; Wild et al., 2017)

The diversion of resources towards COVID-19-control has weakened TB programmes in many countries (Reid et al., 2020), leading to disruption of health services. In many settings, this has included limiting access to diagnosis, treatment, and prevention of TB, among many other communicable and non- communicable diseases. Policy-makers in overwhelmed health systems have often not been focused on response beyond the emergency phase of the pandemic, and this focus only on the immediate situation has further marginalized migrant and mobile populations. Addressing TB, COVID-19, and migration from a syndemic perspective offers an opportunity to address two airborne risks in conjunction. This perspective not only highlights the importance of social, political, and structural context as markers of risk but identifies communities whose bio-

social circumstances are contributing to both pandemics. It allows local communities to mobilize around a comprehensive approach to stop both epidemics. The Zero TB Initiative—in which local communities (e.g., municipalities, districts) work within their context to create an island of TB elimination through building a comprehensive program to address tuberculosis amongst those who are most vulnerable—pro- vides one example of how to achieve this. For migrant and mobile populations, such an approach is critical: legal, social, and political environments at local, regional, and national levels define the levels of inclusion or exclusion from health systems, which ultimately determine the risk of being infected and affected by a disease and its consequences.

In the end, every infection is an opportunity for a bacteria or virus to mutate. This is true for both COVID-19 and TB. Preventing transmission and caring for the sick is a critical component of stopping both pandemics, and the benefits of synergistic efforts are manyfold (Keene et al., 2020; Reid et al., 2020). While we all can understand that we are only safe once we are all safe, this will only be achieved if we focus attention on those who need to care the most, including the most marginalized migrants and forcibly displaced populations worldwide.

11. Overall recommendations

1. Lessons learned from effective TB treatment are essential to integrate into the COVID-19 response–including for migrants in precarious conditions and displaced populations. There is a need for continued investment in health services for TB during the COVID-19 pandemic and beyond. Redirecting resources is a false economy that could reverse progress made on TB, with particularly severe consequences for already marginalized populations, including migrants. Using TB as the foundation for broader care delivery in collaboration with communities and municipalities is an approach that has already been implemented in a number

of places, including Durban (South Africa), Lima (Peru), Chennai (India), and Karachi (Pakistan). Adopting a sound epidemic-control strategy for TB based on search (searching actively for cases), treat (ensuring that the correct treatment is given as early as possible and with appropriate supports), and prevent (identifying at-risk contacts and ensuring they receive the treatment and care they need, and preventing transmission through infection control), creates a platform for community-based diagnosis and care delivery that is essential to stem COVID-19. Yet more attention needs to be given to precarious migrants and displaced populations, as they may not be perceived or identify themselves as members of communities or residents. Possible issues of fear, social and legal insecurity have to be taken into account and addressed in respectful ways, granting trust for providing services and support without discrimination.

2. The effective inclusion of migrants and forcibly displaced populations in health policies and systems are urgently needed. Health policies need to include strategies for combatting stigma and discrimination towards TB and COVID-19 patients, with specific attention to xenophobia, racism, and anti-migrant sentiments related to these conditions. Even in countries like Peru and South Africa that officially embrace universal access to health care, structural barriers still exist and prevent the inclusion of migrants due to gender, social or legal status. The syndemic of TB and COVID-19 illustrates the benefit that can be expected from effectively including all migrants into services through earlier diagnosis, better treatment outcomes, and limiting transmission. However, in conflict-driven countries, such as Syria, the syndemic of TB and COVID-19 is only one significant aspect of the severe health and humanitarian crisis caused

by the war. Collaborative efforts of all stakeholders are needed to prevent further avoidable harm and suffering among displaced populations inside and outside conflict-affected countries.

3. The upstream social and political factors that foster the increased vulnerability of migrants and forcibly displaced populations to the syndemic of COVID-19 and TB must be addressed. Improving living conditions for migrants in situations of precarity and for forcibly displaced populations (especially those in crowded IDP/refugee camps, within detention/reception centres/prisons) is essential for preventing both COVID-19 and TB. Those who have been forcibly displaced across Syria have particular vulnerabilities which increase their susceptibility to both TB and COVID-19. A multi-pronged approach that addresses their living conditions (particularly those in tented settlements) improves heating and ventilation, supports nutrition, health education (including smoking cessation), and supports healthcare access, is urgently needed. Screening for both TB (latent and active case finding) and improved contact tracing should be implemented across geographical regions. Given the redirection of resources to respond to the COVID-19 pandemic, collaborative responses as has been utilised in northwest Syria are key to addressing both these pandemics. Precarious working conditions of labour migrants must be addressed independently of legal statuses, such as for those working in the mining industry, construction, agriculture, and abattoir facilities, where due to their living and working conditions, they are a highly vulnerable group to TB and COVID-19. Undocumented or irregular migrants working in low-wage jobs are at particularly high risk of being exploited and overlooked. For example, in Peru, it has been observed that health services focusing only on SARS-COV-2 miss the opportunity to diagnose TB in families with suspected COVID-19 who also live in vulnerable conditions (poverty, overcrowding, etc.). A TB active

case-finding approach among migrant populations working or living in poor conditions has therefore been advocated.

4. Compliance of governments and all stakeholders with internationally agreed-upon human rights standards, and access to the underlying determinants of health without discrimination on any grounds, is the backbone of health systems and sustainable pandemic response. Nobody is safe until all are safe. Upstream interventions are needed, at the level of political and legal action, in order to ensure state authorities and the private sector are held account- able to these standards. Successful initiatives of health ministries or municipalities collaborating with civil society and NGOs during COVID-19, such as in Peru and South Africa, represent positive progress, yet coherent and long-term policies have to be also implemented at the national level.

Part 3: A physician's reflection

12. Overall findings

The present work illustrated a series of interconnected, commonly shared yet different experiences of access to healthcare for migrants, asylum seekers, and refugees in Latin America (Peru, Guatemala, Mexico), southwest Asia (Syria), and Southern Africa (South Africa). As discussed in the first section, TB is an interesting disease to assess the impediments that people on the move face because it is recognized by governments as a priority, leading to free and widely available services—in theory. Furthermore, the history of TB and the origins of global health inequalities in LAC illustrates the many challenges all poor people face when attempting to fulfill their right to health.

The individual story of Abelino illustrated the many ways in which historically bound structural and institutional violence perpetuates further harm. I likewise highlight how migrants' structural and syndemic vulnerability increases their risk of dying compared to their citizen counterparts. This work described the origins of health and social inequality driving migration to unprecedented levels. It also highlighted the many failures from governments and institutions to consider the social determinants of health for people on the move. Abelino's story is the only one that illustrates the many violations of the right to health for migrants, especially during a global pandemic such as COVID-19. The case of Peru, South Africa, and Syria illustrated how the broader social forces, which are deeply rooted in neoliberal and colonial policies, affect on a large scale the life and well-being of thousands of individuals who are daily forced to migrate within their country or across borders.

13. Limitations

The upstream of economic, structural, and political determinants of health affect not only one individual but all individuals around the globe, as discussed and exemplified in The Lancet Migration situational briefs (Lancet Migration and Health, 2020). Regional cases provided an opportunity to detangle contemporary approaches to human-rights-based interventions. Previous work utilizing AAAQ frameworks has only been able to address the supply side rather than the implications and repercussions of low adherence to human rights in policy implementation and country legislation (Pérez-Molina et al., 2020a; The Danish Institute for Human Rights, 2014). To my knowledge, assessment tools to explore and evaluate whether programs, policies, guidelines, and protocols respect, protect, and fulfill the right to health for migrants have not yet been published. Likewise, a "one-size-fits-all" approach or recommendations does not fully capture the complex dynamic and multidimensional individual or collective experiences of access to healthcare. Furthermore, access to healthcare and the right to health has been mostly fixed into either adhering or not adhering, such as the Danish Study for Human Rights access to Water and the Right to Health analysis of access to TB care in Chiapas, Mexico. Levesque and colleagues, as well as the UCL-Lancet Commission on Migration and Health, proposes addressing access to healthcare from a holistic, social medicine perspective (Abubakar et al., 2018a; Levesque et al., 2013).

Accessing healthcare for migrant populations is a dynamic and multidimensional experience. The dynamic nature of access to healthcare is a result of a series of interactions between the a) the demand side (migrants chronic, evolving and acute medical and social needs; shifting demographics; economic and individual agency – defined mainly by immigration and social status; lifetime exposure to social exclusion, chronic destitution, origin or transit country's

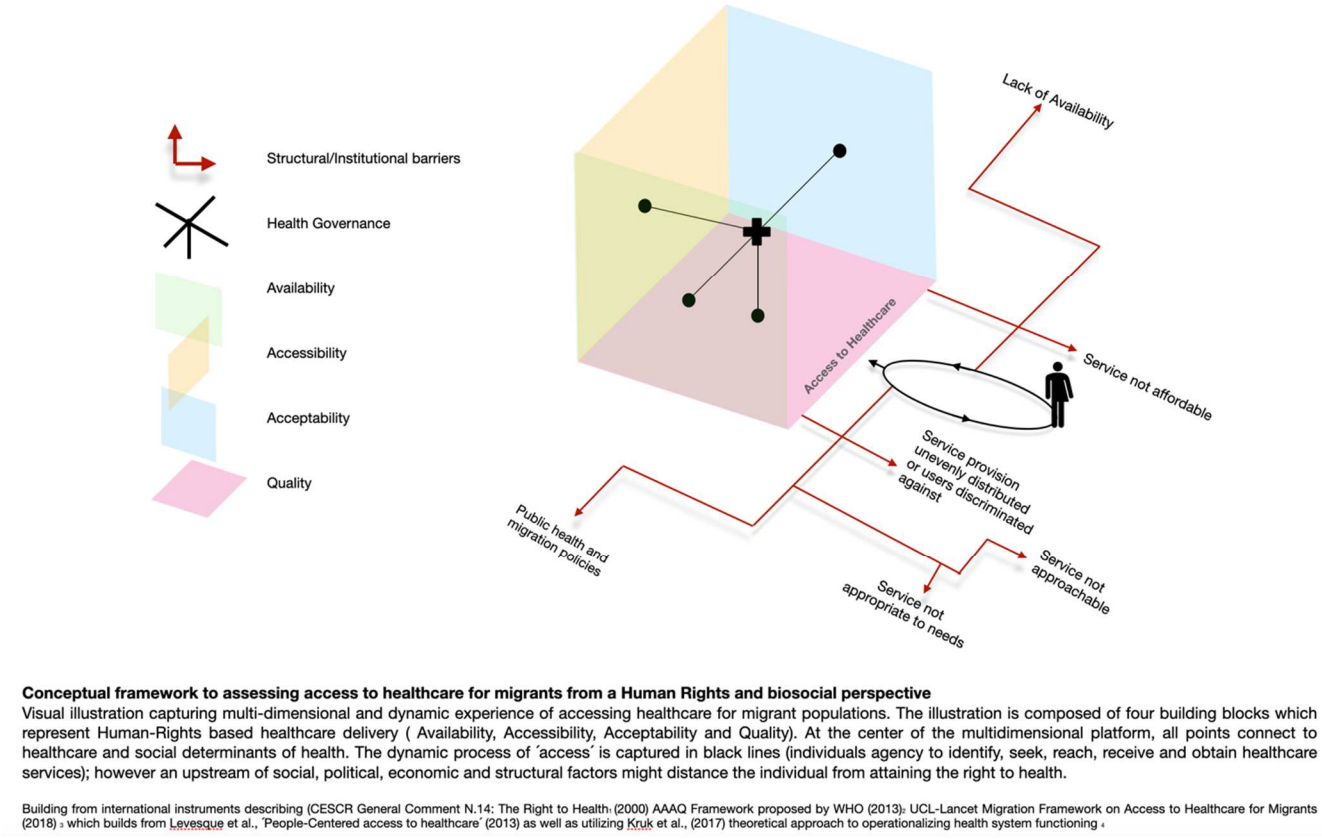
epidemiological, nutritional, as well as the socio-cultural and political context.) and b) the supply side which includes availability, accessibility – physical accessibility, economic accessibility, non-discrimination, access to information – acceptability and quality of healthcare services (AAAQ).

Notwithstanding, the current health systems approach to health system strengthening has been limited to rigid healthcare delivery models. Health system financing has changed little and remains rooted in the past. With few adaptations to the current migration trends, not considering the heterogenous and mobile nature of migrants' needs. Access to healthcare for vulnerable migrants – although referencing human rights instruments such as the ICESCR and General Comment No. 14 "The Right to Health" continue to be designed to solve biomedical problems (UN Economic and Social Council, 2000). Equitable and responsive health systems for migrants are much more than a fixed signed or ratified international document, a single-layered guideline to human-rights-based approaches, or unrealistic National guidelines, protocols, or programmes.

14. Opportunities and future directions

Addressing migrant, asylum seekers, and refugee health requires more than legislation reforms or empty political discourse; it requires translational policy, accountability measures, funding, and of course, political will. My experience as a medical doctor, as a global health scholar, and personal experiences navigating the health system with my migrant patients helped me understand the statement from Hunt concerning the difficulty of operationalizing the right to health from reading the policy or legal documents (Hunt, 2016, p. 116). Unfortunately, the current analytical approaches to addressing human-rights-based interventions lack the sensitivity to capture my patients' experiences. As a result, the operationalization of the right to health from a human-rights and biosocial perspective has yet to be designed and implemented. Therefore, the following is an early-stage proposal to evaluate policies, programmes, and protocols to improve

access to healthcare for migrants on the move. ´CUBE´ is a joint conceptualization of migrant's multidimensional and dynamic experience of accessing healthcare captured in our instrument development (Figure 5).



Conceptual framework to assessing access to healthcare for migrants from a Human Rights and biosocial perspective
Visual illustration capturing multi-dimensional and dynamic experience of accessing healthcare for migrant populations. The illustration is composed of four building blocks which represent Human-Rights based healthcare delivery (Availability, Accessibility, Acceptability and Quality). At the center of the multidimensional platform, all points connect to healthcare and social determinants of health. The dynamic process of ´access´ is captured in black lines (individuals agency to identify, seek, reach, receive and obtain healthcare services); however an upstream of social, political, economic and structural factors might distance the individual from attaining the right to health.

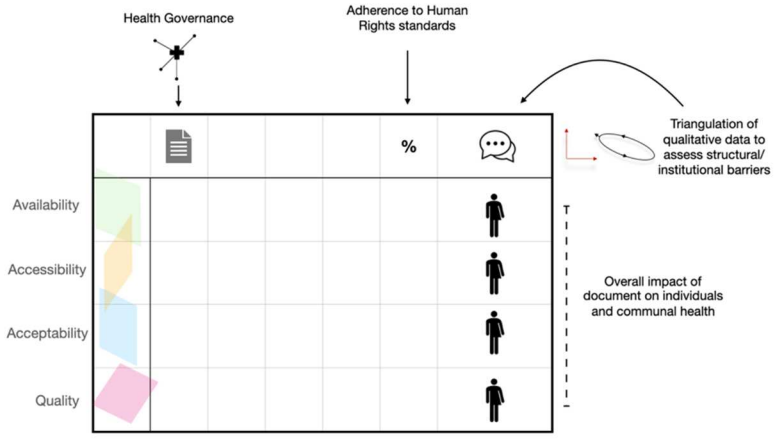
Building from international instruments describing (CESCR General Comment N.14: The Right to Health[1] (2000) AAAQ Framework proposed by WHO (2013)[2] UCL-Lancet Migration Framework on Access to Healthcare for Migrants (2018) [3] which builds from Levesque et al., ´People-Centered access to healthcare´ (2013) as well as utilizing Kruk et al., (2017) theoretical approach to operationalizing health system functioning [4]

Figure 5. Conceptual framework to assessing access to healthcare for migrants from a Human Rights and biosocial perspective.

The illustration is composed of several layers for accessing care: 1. four building blocks which represent Human-Rights based healthcare delivery built from the AAAQ and General Comment n.14; these building blocks represent the multidimensional human-rights based platform (supply), which are essential components of health equity and bound together at the centre, ensures migrants provision of care and social determinants of health. In the absence of such building blocks (AAAQ), health systems - including those provided outside of health facilities - are at risk of

violating the right to health for migrants and other vulnerable individuals. The demand side is illustrated by cyclical black lines, which represent Levesque's concept of access: "identify healthcare needs, to seek healthcare services, to reach healthcare resources, to obtain or use healthcare services, and to actually be offered services appropriate to the needs for care" (Levesque et al., 2013) whilst there are a series of upstream factors (red lines) which ultimately distances migrants from accessing care, forcing them to either seek care elsewhere or exposing them to physical or emotional harm – including deportation or ever-changing health-seeking behaviors – which not only impact the individual attempting to access healthcare but future generations either in transit, resettling or in home countries.

To measure such experience, we proposed operationalizing the Right to Health and Access to Healthcare by building a comprehensive framework for evaluating migrant health policy – including program evaluation and implementation analysis to capture the dynamic and multidimensional nature of migrant's access to healthcare (figure 6).



Conceptual illustration of dynamic and multidimensional matrix which operationalized Access to Healthcare. AAAQ was complemented with key points from General Comment N.14 and set as criteria (categories) from which information from key documents/policies/guidelines will be analyzed and merged for interpretation. Triangulation of data (secondary qualitative data emerging from grey and peer literature or key informant and stakeholder interviews allows viewing the impact of such document on the lived experiences of migrant individuals per voices from the field; this allows a more in-depth and comprehensive analysis capturing dynamic an multidimensional experience of accessing healthcare.

Figure 6. Conceptual illustration of dynamic and multidimensional matrix operationalizing access to healthcare

Although the proposed multidimensional and dynamic matrix is in the early stages of conceptualization, considering key components from such would be worth exploring in detail. We saw from the case of Abelino that his inability to access healthcare was in part due to deficient implementation of AAAQ, while his successful diagnosis and treatment was possible due to the work of an NGO.

The ultimate aim is to be able to observe the way in which each individual interacts with services so that we succeed at understanding the emerging and chronic needs. Otherwise, the successful translational policy might continue to be aspirational rather than a step closer to ´leaving no one behind.´ This tool offers an opportunity to design accountability measures bound to international and national law, which could then be used for advocacy and change. Identifying major barriers experienced at the demand and supply side, with proper collaboration with all actors involved in the direct and indirect service provision could warrant evidence-based, practical, and sustainable solutions that not only capture the dynamic experience of migrant's pathway to care but one that contributes to the growing agendas on universal healthcare coverage and the Sustainable Development Goals.

15. Appendices

Appendix A: Migration glossary provided by IOM

Movement definitions	
International Migration	"The movement of persons away from their place of usual residence and across an international border to a country of which they are not nationals". (pp. 112)
Circular migration	"A form of migration in which people repeatedly move back and forth between two or more countries". (pp.29)
Climate migration	"The movement of a person or groups of persons who, predominantly for reasons of sudden or progressive change in the environment due to climate change, are obliged to leave their habitual place of residence, or choose to do so, either temporarily or permanently, within a State or across an international border." (pp.31)
Irregular migration	"General term (not universally acceptable definition) Movement of persons that takes place outside the laws, regulations, or international agreements governing the entry into or exit from the State of origin, transit, or destination." (pp.116)
Regular Migration	"Migration that occurs in compliance with the laws of the country of origin, transit, and destination". (pp.175)
Labour migration	"Movement of persons from one State to another, or within their own country of residence, for the purpose of employment." (pp.123)
Return migration	"In the context of international migration, the movement of persons returning to their country of origin after having moved away from their place of habitual residence and crossed an international border. In the context of internal migration, the movement of persons returning to their place of habitual residence after having moved away from it". (pp.186)
Key migration terms and type of migration	
Migrant	"An umbrella term, not defined under international law, reflecting the common lay understanding of a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons. The term includes a number of well-defined legal categories of people, such as migrant workers; persons whose particular types of movements are legally defined, such as smuggled migrants; as well as those whose status or means of movement are not specifically defined under international law, such as international students." (pp.132)
International Migrant	"Any person who is outside a State of which he or she is a citizen or national, or, in the case of a stateless person, his or her State of birth or habitual residence. The term includes migrants who intend to move permanently or temporarily, and those who move in a regular or documented manner as well as migrants in irregular situations "(pp.112)
Irregular migrant	"A person who moves or has moved across an international border and is not authorized to enter or to stay in a State pursuant to the law of that State and to international agreements to which that State is a party." (pp.133)
Asylum seeker	"An individual who is seeking international protection. In countries with individualized procedures, an asylum seeker is someone whose claim has not yet been finally decided on by the country in which he or she has submitted it. Not every asylum seeker will ultimately be recognized as a refugee, but every recognized refugee is initially an asylum seeker." (pp.14)
Environmental migrant	"A person or group(s) of persons who, predominantly for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are forced to leave their places of habitual residence, or choose to do so, either temporarily or permanently, and who move within or outside their country of origin or habitual residence." (pp.64)
Internally Displaced persons	"Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed

	an internationally recognized State border." (pp.109)
Migrant worker	"A person who is to be engaged, is engaged or has been engaged in a remunerated activity in a State of which he or she is not a national." (pp.136)
Seasonal migrant worker	"A migrant worker whose work, or migration for employment is by its character dependent on seasonal conditions and is performed only during part of the year." (pp.194)
Refugee	"A person who, owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it. (pp.171)
Unaccompanied children/ minors	Children, as defined in Article 1 of the Convention on the Right of the Child, who have been separated from both parents and other relatives and are not being cared for by an adult who, by law or custom, is responsible for doing so. (pp.223)
Source: (Sironi et al., 2019)	

16. References

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