

# International Literature Review for Newcomer, Migrant and Refugee Health



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## Rationale

There are currently more than 214 million international migrants worldwide and this number is expected to double to 400 million by 2050.<sup>1</sup> Canada admits more than 250,000 immigrants every year<sup>2</sup> which includes family class, economic immigrants and refugees and this number is likely to increase with the current Syrian refugee crisis.

While migration can create positive opportunities for individuals, it often creates conditions and circumstances that intensify risk and vulnerability to HIV and other communicable disease (e.g., separation from family, presence or absence of social networks in the country of destination, extreme stress, lower socio-economic status, and reduced access to harm reduction and HIV prevention, treatment and care services). New immigrant populations including those arriving in Canada often arrive healthier than the native-born population and have lower mortality rates, but their health begins to decline after their arrival.<sup>1,3</sup> While these migrants are able to transcend geographic limitations, they often face significant barriers with respect to political rights and access to local social and health services. Certain migrant populations, such as refugees, asylum seekers, temporary workers, low income immigrants and immigrant women with limited local language proficiency, are at risk for a rapid decline in health. Refugees, for example, experience a threefold challenge to their health and well-being: 1) psychiatric disorders precipitated by the refugee experience, 2) infectious and parasitic diseases endemic to countries of origin, and 3) chronic diseases endemic to host countries.<sup>4</sup> For these reasons newcomers represent a hidden at-risk population whose health and social care needs require further exploration to prevent new infection, reduce vulnerability, and mitigate the impact of HIV, HIV related co-infections, and other communicable diseases.

With an increasingly diverse population of newcomers and the migration of newcomers across Canada's regions and jurisdictions, there is a need to learn from program experiences beyond Canada's borders and gain transferrable insights from the responses to HIV and newcomer and refugee health taking place in other countries. In light of this need, ICAD has produced this synthesis of national and international evidence and promising practices in HIV and HIV/TB/HCV/STBBI related prevention, treatment and care programming and delivery models reflective of newcomer diversity. Transferable models and lessons for the Canadian setting will be identified.

## Objective

The objective of this document is to synthesize national and international evidence and promising practices in HIV/TB/HCV/STBBI (HIV/Tuberculosis/Hepatitis C/Sexually Transmitted and Blood-Borne Infections) related prevention, treatment and care programming and delivery models in relation to newcomer health and social wellbeing.

## Sources for this Review

A review of the literature, including published systematic reviews, was undertaken using Cochrane Library, Google Scholar and Pub Med and articles of top relevance were reviewed. Some of the grey literature was also reviewed through online searches and reviewing websites of organizations affiliated with the health of refugees and migrants. Information from some of the research conducted by the African Black Diaspora Global Network (ABDGN) was also utilized.

## Background

Newcomers or international migrants refers to immigrants, refugees, refugee claimants, and asylum seekers.<sup>1</sup> In Canada, the terms often utilized for newcomers are immigrants, refugees or non-status people and is dependent on routes to Canada and associated immigration application process.<sup>5</sup> Immigrants are either sponsored immigrant Family Class or independent immigrant e.g. skilled workers, students, entrepreneurs etc.<sup>7</sup> For the purposes of this document, we consider newcomers as people who are not permanent residents of Canada. A permanent resident is a person who has been given permanent resident status by immigrating to Canada, but is not a Canadian citizen. Permanent residents are citizens of other countries.

Under the Geneva Convention, “refugees” are people who have fled their countries of origin owing to well-founded fear of being persecuted for reasons of religion, race, nationality, membership in a particular social group, or political opinion.<sup>6</sup> Social group can include communities based on sexual orientation, victims of domestic violence or transgendered people. In Canada, refugee claimants are either a Convention refugee or a person in need of protection who has a well-founded fear of torture or unusually cruel treatment or risk to life in his or her country of origin.<sup>7</sup> Typically in Canada, asylum seekers are referred to as “refugee claimants.” They are people who have arrived in Canada and have made a refugee claim. They have yet to be recognized as official refugees. The Refugee Review Board of Canada reviews each claim and accepts or rejects the asylum seeker as an official refugee.<sup>7</sup> Non-status people do not have full or legal status in Canada but had some form of status at some point e.g., rejected refugee claimant, those with expired visas.

Currently, immigration represents two-thirds of Canada’s population growth, and immigrants make up more than 20% of the nation’s population.<sup>8</sup> Canada accepts approximately 25,000 refugees from around the world each year.<sup>2</sup> The health characteristics of refugees often differ from those of Canadian-born individuals and non-refugee immigrants, and studies have shown that refugees tend to experience poorer health outcomes.<sup>10,9</sup> The burden of depends on several key factors including country of origin, previous living conditions, access to health care and migration factors.<sup>11</sup>

Canadian immigration legislation requires that all permanent residents, including refugees, refugee claimants and some temporary residents, undergo an immigration medical examination (IME), consisting of a brief history and physical examination, chest x-ray scan (age 11 and older), Tuberculosis (TB) test, urine test (age 5 and older), and syphilis and HIV testing (age 15 and older).<sup>10</sup> Screening is undertaken to assess the potential burden of illness and a limited number of public health risks. The examination is not designed to provide clinical preventive screening, as is routinely performed in Canadian primary care practice, and it is linked to ongoing surveillance or clinical actions only for TB, syphilis and HIV infection.<sup>11</sup> More comprehensive medical care is at the discretion of subsequent health care providers when or if a migrant or refugee is able to access care.<sup>12</sup> Since the passing of the Immigration and Refugee Protection Act in 2002, Canada waived the burden-of-illness barrier for refugees who fled their countries of origin on well-grounded fears of persecution.<sup>13</sup>

Unlike most other immigrants, many refugees come directly from refugee camps in the developing world and are at increased risk of infectious and other preventable diseases. In a retrospective cohort study on 112 consecutive post-immigration refugee patients seen between December 1, 2004, and November 30, 2005, almost half the refugees in this study had latent TB. About 1 in 17 refugees had HIV infection or tested positive for hepatitis B surface antigen.<sup>14</sup>

Upon arrival, most new immigrants are healthier than the Canadian-born population, both because of immigrant-selection processes and policies and because of sociocultural aspects of diet and health behaviors. However, there is a decline in this “healthy immigrant effect” after arrival.<sup>10</sup> Despite Canada’s universal health care system, considerable numbers of immigrants and refugees reside

legally in Canada without any entitlement to public health insurance.<sup>3</sup> Other immigrants and refugees are granted coverage, but only after long delays: four provinces impose a mandatory 3-month waiting period, but wait times for public health insurance average 2.1 years.<sup>12</sup> Rejected refugee claimants who continue to reside in Canada while they pursue legal avenues of appeal lose their eligibility for public health insurance and are much less likely to seek medical care.<sup>15</sup> Thus, many migrants and particularly refugees experience gaps in access to services within the health system.

The health needs of newly arriving immigrants and refugees often differ from those of Canadian-born populations. Compared to Canadian-born populations, subgroups of immigrants are at increased risk of disease-specific mortality.<sup>16</sup> For example, African and Caribbean communities in Canada and other developed countries are disproportionately affected by HIV/AIDS.<sup>17</sup> The prevalence of diseases depends on exposure to disease, migration trajectories, living conditions and genetic predispositions. Language and cultural differences, along with lack of familiarity with preventive care and fear and distrust of a new health care system, can impair access to appropriate health care services.<sup>17</sup>

This review will focus on key issues of HIV, TB, hepatitis C and sexually transmitted infections (STIs) among migrant populations in Canada and other similar high-income countries which have high rates of immigration.

## HIV

A systematic literature review from Europe, North America and Australia between 2005 and 2009 revealed that HIV prevalence of migrants from HIV-endemic countries is higher than the general population's, and migrants have higher frequency of delayed HIV diagnosis and are more vulnerable to the negative effects of disclosure of HIV status.<sup>18</sup> The flow of migrants from high HIV prevalence regions such as sub-Saharan Africa to western countries is changing the profile of HIV infection in host countries, with immigrants from these countries accounting for a large proportion of heterosexually acquired HIV infection.<sup>19</sup> In Canada, the highest rates of HIV infection among immigrants were found in people from high prevalence areas of the world with endemic HIV.<sup>20</sup> People from countries where HIV is endemic represented 14% of people living with HIV in Canada while representing only 2.2% of the population.<sup>21</sup> The estimated new infection rate among individuals born in HIV-endemic countries is about 8.5 times higher than among other Canadians.<sup>22</sup>

In a study looking at health status of newly arrived refugees in Toronto, between Dec 2011 and June 2014, data from a clinic serving refugees revealed the overall rate of HIV infection was 2% and the rate hepatitis C infection was less than 1%.<sup>22</sup> In Canada, immigrants and refugees with HIV face complex demands including: trauma and challenges of the migration journey, the complex and confusing Canadian immigration and refugee system, the challenges of adapting to a new culture and lifestyle, difficulties with access to housing and employment, and stigma and discrimination in their own ethno-racial communities and in larger society. Immigrants and refugees also face barriers in accessing HIV-related information, treatment and support related to language and culture, health literacy and systemic discrimination.<sup>7,23</sup>

Several factors contribute to this higher HIV prevalence among migrants in high income countries. A systematic review revealed several structural barriers to HIV testing including high levels of unemployment and poverty in migrants, low social status and inequalities.<sup>18</sup> In contexts where an HIV diagnosis may adversely affect visa or residence application or where there is a fear of deportation, migrants are reluctant to be tested. The legal status and implication of testing positive was one of the main barriers to accessing HIV testing from studies in Canada, USA, Spain and UK.<sup>18</sup> Lack of entitlement to health care is another barrier to HIV testing. A pilot project in Canada documents problems faced by recent migrants in accessing health care within provincial and federal health systems for both undocumented migrants and legal migrants. There is need to improve the

coordination between the provincial and federal health mandates so that migrants do not experience detrimental interruptions of care and HIV treatment.<sup>24</sup>

Other key impediments to accessing HIV related services include cultural and linguistic barriers, racism, and xenophobia. In addition, migrants fear stigma and discrimination from their own communities and other cultural and gender norms may dissuade access to services.<sup>25</sup> Stigma and discrimination related to HIV impedes access to services and are associated with avoidance of or delays in seeking HIV testing, delays in disclosure of seropositive status to partners and practitioners, and postponement or rejection of treatment.<sup>11</sup> Major gaps in knowledge about HIV were found among the South Asian population in Canada and considerable stigma existed against people living with HIV which impeded access to services and social support.<sup>25</sup>

Another key barrier is the low HIV risk perception despite having knowledge of HIV prevention. In a study conducted in the UK, Ethiopian and Eritrean immigrant communities perceived the UK to be a low-risk environment, resulting in low male condom use.<sup>26</sup> In a study conducted in African born immigrants and refugees living with HIV in Minneapolis and St Paul, Minnesota the barriers to accessing care included: fatalistic views about HIV, fear of isolation, fear of deportation, lack of knowledge of the care system and HIV-related services, and employment issues.<sup>26</sup> Despite the perceived barriers of newcomers to Canada, HIV treatment uptake has increased dramatically. Mortality was lower among recent immigrants and virologic suppression was achieved more quickly in recent female immigrants.<sup>27</sup>

## Tuberculosis (TB)

In many low-incidence countries such as Canada, risk of TB is greatest in migrant populations. The foreign-born population bears 65% of the active TB cases in Canada, with a rate of active TB 20 times higher than that of the non-Aboriginal Canadian-born population.<sup>28</sup> Co-infection with TB is common among those living with HIV in many HIV-endemic countries.<sup>29</sup> Some of this disease can be identified by pre-entry screening—such as through Canada’s IME—particularly from countries with high-prevalence which helps ensure early diagnosis and effective treatment.<sup>30</sup> Most latent cases occur between five to seven years after resettlement. Immigrant-receiving countries similar to Canada (Australia, Europe, USA) have comparable trends for TB.<sup>4</sup> In Switzerland, immigrants from high-burden countries and people who are living with HIV are risk groups for TB.<sup>31</sup>

Chemoprophylaxis with isoniazid is highly efficacious in decreasing the development of active TB in people with latent TB infection who adhere to treatment. However, health care provider and infrastructure barriers, poor diagnostic tests, and the long treatment course, limit effectiveness of current programs.<sup>35</sup>

## Hepatitis C Virus (HCV)

Research has shown that immigrants have increased mortality from chronic viral hepatitis (2-4 fold) and hepatocellular carcinoma (2-5 fold) compared to the Canadian born population, a large proportion of which is likely due to chronic HCV infection. Approximately 3% of immigrants are chronically infected with HCV (up to 18% in certain populations) which is likely attributable to undetected and untreated chronic HCV infection, most often acquired through unsafe injections or medical procedures in their countries of origin.<sup>32</sup> Despite this, there are no systematic targeted screening programs in Canada for chronic HCV infection in the immigrant population.<sup>32</sup> Older age and region of origin, particularly sub-Saharan Africa, Asia, and Eastern Europe were the strongest predictors of HCV seroprevalence and would benefit from targeted screening.<sup>33</sup>

## Sexually Transmitted Infections (STI)

A study conducted on sexually transmitted infections among newly arrived refugees in the USA showed a very low prevalence of chlamydia and gonorrhea and therefore routine screening would not be recommended.<sup>34</sup> Other than HIV, syphilis is the other significant STI that warrants screening. Immigrants from countries with high prevalence of syphilis are a significant source of syphilis notification in Canada.<sup>35</sup> In Canada, all migrants including refugees over 15 years of age are screened using syphilis serology.<sup>36</sup> Recent immigrant populations underuse the healthcare system, and therefore, there are fewer opportunities for routine screening and treatment of STIs.<sup>37</sup>

## Strategies to Address Immigrant and Refugee Health Issues

This section outlines some general strategies to consider when dealing with immigrant and refugee health services including key health delivery models. Following this, detailed disease-specific strategies in prevention, treatment and care of HIV, TB, Hepatitis C, and sexually transmitted infections among migrants from similar contexts including those in Canada are highlighted.

### General Health Strategies

A systematic review of the Healthy Immigrant Effect was released in Canada in February 2015.<sup>37</sup> While this study does not focus on specific diseases, it suggests that immigrants' health advantage varies across the life-course and within each stage of the life-course by different health outcomes. The review recommends that policies be targeted for specific life-course stages and, within each age group, at health outcomes for which immigrants are known to be at a disadvantage.<sup>38</sup> In Italy, a study among refugees indicated a strong need for a protocol for early diagnosis of infectious diseases (such as Hepatitis B, C, HIV, and syphilis), to allow the adoption of prevention measures and safeguard health.<sup>39</sup>

Research on the impact of primary health care delivery models for refugees in resettlement countries demonstrated that case management, use of specialist refugee health workers, interpreters and bilingual staff are key elements of models most frequently associated with improved access, coordination and quality of care for refugees.<sup>40</sup> Access to primary health care is improved by multidisciplinary staff, use of interpreters and bilingual staff, no-cost or low-cost services, outreach services, free transport to and from appointments, longer clinic opening hours, patient advocacy, and use of gender-concordant providers. Coordination between the different health care services and services responding to the social needs of clients is improved through case management by specialist workers. Quality of care in resettlement countries is improved by training in cultural sensitivity and appropriate use of interpreters.<sup>40</sup>

In 2011, Canadian evidence-based clinical guidelines were developed for immigrants and refugees. It recommended that clinical preventive care should be informed by the person's region or country of origin and migration history.<sup>11</sup> It also noted that improved understanding of the scope and nature of the immigration process will help practitioners who will be increasingly involved in the care of immigrant populations, including in prevention, early detection of disease and treatment.<sup>7</sup> The guidelines also noted that forced migration, low income and limited proficiency in English or French increase the risk of a decline in health and should be considered in the assessment and delivery of preventive care.<sup>11</sup>

Information and education needs to be provided to remove cultural barriers to ensure access to services. A study discussing barriers to accessing health care services for West African refugee women living in Western Australia showed the following barriers: shame or fear of what family and friends might think, fear of being judged by the treatment provider, fear of hospitalization, and logistical difficulties.<sup>41</sup> Addressing immigrant and refugee health goes beyond infectious diseases and needs to look at other health issues and social determinants of health. In Canada, a Delphi consensus process engaging practitioners was used to develop guidelines to identify often-neglected conditions in immigrant and refugee medicine. Even though infectious disease continues to be important, mental health and chronic diseases have emerged as areas of concern in the care of recently arriving immigrants and refugees.<sup>42</sup> In the US, strategies to improve health access to refugee asylum seekers include targeting social programs and mental health services, expanding Medicaid eligibility/enrollment, promoting community-based organizations, enforcing the use of trained medical interpreters, and improving cultural competency.<sup>43</sup>

Information management is important to enhance health service delivery. Good disease surveillance systems at the federal and provincial levels for newly arriving refugees and the need for follow-up once refugees are settled into the community with regular health care providers.<sup>19</sup> In the United States, all newly arriving immigrants and refugees are screened before arrival and required to have a medical exam within 30 days of arrival. Health departments need timely and accurate notifications of newly arriving immigrants, refugees, and persons with other visa types to facilitate these evaluations. Notifications for all newly arriving refugees (with or without medical conditions) and immigrants with medical conditions are provided by the USA Centre for Disease Control's Electronic Disease Notification (EDN) system. This system, introduced in 2009, provides more direct notifications to health departments than the previous paper-based system about newly arriving immigrants and refugees who need medical follow-up. Furthermore, the EDN allows health departments to use their resources as effectively as possible by providing clinical information that identifies the refugees and immigrants who should be prioritized for evaluation and treatment (e.g., approximately 75% of follow-up occurred among persons with suspected TB).<sup>44</sup>

Most high-income countries accepting refugees have a network of multiple stakeholders addressing the needs of migrants. In Australia, the Refugee Health Network of Australia (RHeaNA) is a network of health and community professionals who share an interest and/or expertise in refugee health. The Network draws members from every Australian State and Territory. RHeaNA was formed in 2009 in recognition that the health needs of people of refugee backgrounds are complex, and cut across all disciplines of medicine. The Network has a multidisciplinary focus and includes clinicians (medical practitioners, nurses and mental health workers), policy experts, health service managers and researchers.<sup>45,46</sup>

Similarly in Canada, the Canadian Collaboration for Immigrant and Refugee Health (CCIRH) is an interdisciplinary collaboration involving over 150 primary care practitioners, specialists, researchers, immigrant community leaders, and policy makers, that uses an evidence-based lens on the emerging new discipline of migrant health.<sup>47</sup> CCIRH began with an ambitious project aimed at producing evidence based guidelines for primary care practitioners<sup>11</sup> that cover a broad range of infectious diseases; mental health and physical and emotional maltreatment; chronic non-communicable diseases; and women's health.. These guidelines form the basis of delivering health services to migrants. CCIRH hosts a Migrant Health Knowledge Exchange Network through its website where it offers evidence-based guidelines, practical tools, e-learning and resources and works closely with the Cochrane collaboration.<sup>60</sup> These Networks arose from a need of standardizing practices but also to share knowledge and best practices to improve migrant health.

A consortium of agencies in San Diego developed a program of health promotion and disease prevention for Somali and other East African refugees. This mobilization involves a series of steps



designed to facilitate refugee confidence, comprehension, and compliance with prevention efforts through community-provider partnerships and negotiation between refugee and organizational explanatory models of disease causation and prevention. They have documented the journey to wellness for refugees as involving a threefold challenge: 1) treatment of psychiatric disorders precipitated by the refugee experience, including events that occur prior to, during, and subsequent to the journey from countries of origin to host countries; 2) treatment and prophylaxis of infectious and parasitic diseases endemic to countries of origin; and 3) prevention of chronic diseases endemic to host countries.<sup>4</sup>

## Strategies for HIV Prevention, Treatment, Care and Support

In high-income countries, Immigrants from developing and middle-income countries are an emerging priority in HIV prevention. HIV prevention in high-income countries is often framed in terms of priority populations such as gay men/men who have sex with men, people living with HIV, people who inject drugs, sex workers, and (more recently) heterosexual men and women. HIV prevention approaches have generally included whole-of-population approaches and targeted approaches that take into account the shared characteristics of the members of a sub-population. Effective HIV prevention stresses the need for targeted approaches that adapt to the cultural context and population being addressed. A systematic review of HIV behavioral prevention among immigrants in high-income countries reveals that targeted HIV prevention interventions are feasible. The strongest evidence supported ‘consonance’ mechanisms, indicating the pivotal need to incorporate elements of cultural values into the intervention content. Three other mechanisms – ‘understanding’, ‘specificity’ and ‘embeddedness’ –indicated that using the language of immigrants’ ‘mother tongue’, targeting (in terms of ethnicity) and the use of appropriate settings were also critical elements in culturally appropriate HIV prevention.<sup>48</sup>

In Canada, the key protocol is to screen for HIV, with informed consent, all adolescents and adults from countries where HIV prevalence is greater than 1% (sub-Saharan Africa, parts of the Caribbean and Thailand).<sup>11</sup> In addition, after screening or testing, HIV-positive individuals should be linked to HIV treatment programs and post-test counselling.

In a cohort study conducted in Southern Alberta between 2001 and 2007, the impact of changes to immigration policies was evident in 5 years after implementation. Immigrant medical screening identifies increasing numbers of immigrants diagnosed with HIV. Immigrants require engagement in health care to achieve the full benefits of HIV management.<sup>49</sup> In Canada, immigrant and refugee women from HIV endemic countries were unaware of the options available to them for HIV volunteer counselling and testing (VCT). Both practitioners and patients highlighted the issue of stigma and negative outcomes associated with testing that created barriers or delayed testing. Anonymous testing was preferred. Information and decision support regarding HIV testing should be provided via non-targeted strategies such as public education and integrated within general health services.<sup>50</sup> Providing information on HIV testing options and effectiveness of treatment can improve likelihood of testing and acceptance of care.<sup>11</sup>

In Ontario, Community Health Centres (CHCs) have played a strategic role in addressing HIV in Ontario and in Canada. CHCs provide clinical care, treatment and support to people living with HIV as well as health promotion and prevention services for individuals and communities including migrants and refugees who are at risk of becoming infected with the virus. The *HIV/AIDS Best Practices Community Health Centres Project* was established in 2003 and supported CHCs for HIV/AIDS services to be delivered and included: programs and services including supporting individuals and families and building community capacity; addressing the social determinants of health through serving vulnerable populations and addressing barriers to access; and coordinated care through

coordinating programs and services and supporting partnerships. The project also looked at building evidence and evaluating programs and showcasing best practices. CHCs make a unique contribution in integrating care, treatment and support with prevention, outreach and health promotion through: supporting referrals, developing formal HIV testing protocols and follow-up protocols, addressing stigma, and encouraging peer teaching.<sup>51</sup>

In terms of treatment, access to HIV medications can be complex. In Ontario, Canada the compassionate treatment access to anti-HIV drugs is provided by many pharmaceutical (drug) companies who provide a short-term, free supply of drugs on compassionate grounds to people who need them. This usually requires a formal letter of request from a physician and would cover a monthly supply of drugs for a short time on assurance that long-term coverage would resume within a short time of 6 to 12 months. Various HIV service providers have formed a coalition called the Committee for Accessible AIDS Treatment. This group has developed a streamlined compassionate treatment access program to assist people with HIV who have problems accessing anti-HIV drugs. This program assists doctors and people with HIV with all the needed paperwork to get compassionate access to anti-HIV drugs. It also links people with HIV to proper legal and social support to help them get long-term healthcare and drug coverage.<sup>7</sup>

## Tuberculosis (TB)

Despite there being no evidence that imported TB increases the incidence of the disease in host countries, the rise in migration worldwide raises concerns regarding the adequacy of surveillance and control of immigrant-associated TB in low incidence countries. Assessing the performance of screening of immigrants for TB is key to rationalizing control policies for the detection and management of immigrant-associated TB.<sup>52</sup> Immigrant populations have high rates of active TB that could be decreased by screening for and treating latent TB infection.<sup>35</sup> Current TB control strategies in Canada rely exclusively on screening and surveillance of immigrants. This is consistent with current public health discourse and strategies that attributes the high burden of immigrant TB to the exposure of immigrants to infection in their country of origin.<sup>53</sup>

The Canadian Collaboration for Immigrant and Refugee Health recommends screening certain groups as soon as possible on arrival in Canada with a tuberculin skin test and treating for latent TB infection in those found to be positive, after ruling out active TB.<sup>68</sup> In Canada the clinical guidelines include screening children, adolescents under 20 years of age and refugees between 20 and 50 years of age from countries with a high incidence of TB as soon as possible after their arrival with a tuberculin skin test. If test results are positive, it is recommended to rule out active TB and then treat latent TB infection. Monitoring hepatotoxicity when TB is treated is required at all ages, but close monitoring is required in those 50 years of age and older.<sup>11</sup> Adherence to screening and treatment for latent TB infection is poor, but it can be increased if care is delivered in a culturally sensitive manner. Approaches that educate and engage patients, their communities and primary care practitioners might improve the effectiveness of these programs.<sup>35</sup> Many immigrants are at higher risk of TB reactivation because of risk factors such as poverty, malnutrition and overcrowded housing.<sup>53</sup> Significant progress towards TB elimination has been made in Status Indians but not in foreign-born populations as demonstrated in a population based study in Alberta.<sup>54</sup> TB prevention in Aboriginal population attends to the social determinants of health and effective health prevention policies for TB in immigrant populations should take a similar direction.<sup>53</sup>

There is considerable variation that exists in the methods used in screening TB for migrants. Advances in science, diagnostic technology and therapeutic options continue to provide new considerations through which effectiveness of screening is improving e.g the digitization of chest x-rays.<sup>55</sup> In the US, enhanced pre-immigration screening for TB added sputum cultures to the existing

screening system based on sputum smears for persons with abnormal chest radiographs. This enhanced pre-immigration screening was associated with a decline in the proportion of immigrants with TB suspect classifications identified with TB within 6 months of arrival in the United States.<sup>56,57</sup> The results demonstrate that rigorous diagnostic and treatment programs can be implemented in areas with high TB incidence overseas and can be utilized for screening programs for migrants and help initiate treatment.

In low-incidence countries in the European Union (EU), TB is concentrated in big cities, especially among certain urban high-risk groups including immigrants from TB high-incidence countries. The EU established a working group for TB control in big cities and formulated 32 recommendations for big city TB control focusing in nine areas of possible interventions following from exposure through to infection and disease and treatment.<sup>58</sup> This model considers the following interventions: social determinants (housing, immigration, inequalities and socioeconomic deprivation, alcohol and substance abuse and homelessness); awareness: information and education; infection control; case finding; case holding and treatment; latent TB Infection finding; DNA fingerprinting and molecular epidemiology; general policy, legal framework and organization of services; and monitoring and evaluation. This presents a comprehensive model for TB prevention and treatment.

### **Hepatitis C Virus (HCV)**

Since new effective hepatitis C therapies are available, early screening of refugees, at least from highly endemic regions (e.g., hepatitis C prevalence over 3%), with subsequent treatment might be considered to prevent long-term morbidity.<sup>23</sup> Screening individuals for chronic HCV and offering treatment prior to development of cirrhosis is important because treatment is better tolerated.<sup>45</sup> In Canada, the protocol is to screen for antibody to hepatitis C virus in all immigrants and refugees from regions with prevalence of disease over 3% (this excludes South Asia, Western Europe, North America, Central America and South America). Those with positive test results are referred to a hepatologist.<sup>11</sup>

### **Sexually Transmitted Infections (STI)**

A study from Melbourne, Australia revealed that young people with refugee backgrounds face many challenges when making their lives in a resettlement country and their sexual and reproductive health needs are often overlooked. Sexual health promotion beyond HIV including that of sexually transmitted infections should be an explicit component of early resettlement services for youth with refugee backgrounds and strategies need to take account of the pre-migration and resettlement contexts.<sup>59</sup> In Western Australia, it was found that the peer-education approach was successful in increasing knowledge on sexual health among West African refugees where sexual health topics are generally considered “taboo” or too sensitive to discuss.<sup>60</sup> STI/HIV information available in one's language and other educational strategies that consider women's power may improve knowledge, attitudes, and practices (KAP) towards HIV/AIDS and sexually transmitted infections in South Asian migrant women.<sup>61</sup>

## **Selected Country Public Health Responses for Migrant Populations**

In the United States, efforts were made to coordinate health responses with Mexico, its source of the largest group of migrants. It established a US-Mexico website for people to access migrant-based information and resources on public health programs, services and interventions between the

two countries. In 2012, the U.S. Department of Health and Human Services in partnership with the Secretariat of Health of Mexico formally adopted the U.S.-Mexico Guidelines for Cooperation on Public Health Events of Mutual Interest. The guidelines provide a framework for epidemiological data exchange, and coordinated activities linked to infectious disease like the monitoring of individuals with latent TB travelling between both countries.<sup>62</sup> This operational framework can serve as a model for the development of inter and intra-regional public health partnerships between governments that share borders or significant number of mobile populations. In 2013, the Center for Disease Control and Prevention launched their first in a series of refugee health profiles designed for public health officials, clinicians, resettlement agencies and other health providers. The profiles enable access to culturally specific information and resources on a given country – specifically those from which a significant number of refugee clients arriving in the U.S. Each profile contains six key elements: priority health conditions; population movements; healthcare and diet in camps; medical screening of U.S.-bound refugees; and health information<sup>63</sup>. This public health intervention can easily be adapted to reflect newcomer populations rather than refugee populations and represents a promising practice. Providing a singular, comprehensive resource for public health practitioners and other stakeholders to better deliver competent programs, clinical interventions and service delivery protocols would be beneficial. As communities and public health providers encounter more diverse newcomer/foreign born individuals in their jurisdictions, this tool could be a significant aid in improving quality of care.

In the United Kingdom, the UK Health Protection Agency launched the *Migrant Health Guide*,<sup>64</sup> an online resource designed for health practitioners and clinicians to quickly access country-specific information and key health/prevention messages tailored to the specific cultural and ethnic background of immigrant clients. This resource is an educational and practice tool which increases practitioner awareness of immigrant issues and context as well as provides the tools and information to support the delivery of culturally competent services, treatment and care. The guide has four sections:

- general information including language interpretation services, cultural awareness and sensitivities, health care entitlements, and predominant culturally held values and beliefs around health;
- a catalogue of 130 countries of origin of migrants to the UK, each with subsections on general background of the country, predominant infectious diseases based on ethnicity and chronic conditions, and gender specific considerations;
- health topics with guides and factsheets; and
- a checklist for assessing migrant patients, as well as newcomers with strategies for assessing evidence of post-traumatic stress and other potential impacts from the migration process

This user-friendly resource would be a useful model to adapt as it could serve to provide clinicians and practitioners immediate access to a broad range of tools and information that strengthens their capacities to provide treatment, care and support services to culturally diverse client populations. As this resource encourages a clinical environment where the cultural background and experiences of a migrant patient are supported, a more open dialogue in this setting could have far-reaching improvements across diverse public health interventions. In addition, as clients experience more positive and relevant services, possible outcomes of increased engagement with public health officials and institutions could lead to improved treatment adherence, monitoring and support. Further, this type of intervention could have advantageous influence to improve reporting of race/ethnicity data on notifiable infectious disease forms.

In Germany the ‘hand in hand’ guide represents a ground-breaking intervention that capitalizes on community resiliencies and establishes pathways into difficult to access populations. The guide covers 6 broad areas of health system access: health insurance; choosing physicians; pharmacy access; dental services; hospital protocols; and public health service utilization.<sup>65</sup> Launched in 2003, the resource was initially an outcome from a pilot project in 2003 entitled “ MiMi - With Immigrants for Immigrants” a program that recruits, trains and supports individuals from within target migrant communities to become cultural mediators to support newcomers from their countries of origin. The goal of the pilot was to make the German health system more accessible to immigrants, increase their health literacy while simultaneously empowering immigrant communities by prompting their direct participation in the process. It promotes individual responsibility for health and awareness of health issues. The program uses peer-based approaches to build community leaders and strengthen capacities to improve health for populations that often face barriers to accessing health services.<sup>91</sup> This model is an example of how a culture-sensitive intervention can be used to enhance the access of a specific population group to existing mainstream health services without the need for a new and/or targeted service. This is achieved through two key strategies: 1) improving migrants’ health literacy and knowledge so as to improve their access to health services; and 2) building the capacity of health service providers to be responsive to the particular needs of different migrant communities.<sup>66</sup> As this resource identifies the continuum of care and multitude of service access points a single health issue might involve, there are tremendous applications within an infectious disease public health context. As the growth of cultural mediators trained is exponential, this could be a powerful model to test amongst key newcomer populations who could still receive improved treatment outcomes, despite their absence from provincial/territorial strategies and action plans.

Switzerland offers yet another unique model. In 2008, the Federal Office of Public Health in Switzerland launched the Migration and Public Health Strategy 2008-2013.<sup>67</sup> This was based on a previous strategy dating back to 2002. The strategy recognized a determinants of health perspective linked to length of time in Switzerland that could lead to differences in health status and outcomes. The 2008 strategy focused on five key goals: inclusion of migrant populations in public health promotion and prevention programs; improved access to information for migrants to build health efficacy and healthy behaviors; building migrant-sensitive capacities amongst health care stakeholders; increased use and strengthening of interpretation and translation services; and increased population-based knowledge about migrant health. The focus on integration, cross-sectoral partnerships, gender-based approaches, and harnessing existing migrant community capacities further helped to implement an effective national strategy.<sup>91</sup> While the strategy did not detail specific targets, outcomes or objectives, it did support a shift in organizational thinking at the government level to recognize the value of promoting and protecting the health of migrants through dedication, action and policy development. This model could provide a needed blueprint for public health stakeholders to design, articulate, and implement a migrant-focused approach to address current policy gaps for this population.

These global examples of promising practices for immigrants and infectious disease share a common theme: education and training. Due to the numerous knowledge gaps across the continuum of care for all stakeholders involved, many of these interventions have focused on increasing practical knowledge of immigrant communities and relevant health issues. Acknowledging the relatively recent emergence of global concern for migration and health policies, practices, guidelines and protocols, long term investment in basic education interventions may be most appropriate. While direct primary care services and programs that target immigrant populations are still necessary, the countries highlighted in this section have utilized a resource development and knowledge translation approach to help better deliver existing services, rather than create brand new immigrant-specific public health interventions that are not embedded in more traditional/mainstream public health activities.

While Canada has similar immigrant demographic characteristics with some of these countries, there are some distinct agreements for the management of immigration processes and delivery of health services between the federal government and the provincial/territorial governments. There are specific community interventions and models that have been successful in Canada for disease-specific interventions such as HIV. The development of the Canadian Evidenced-Based Clinical Guidelines for Immigrants and Refugees<sup>11</sup> already provides a valuable starting point to inform the design of tailored education/training based resources for clinicians and health practitioners, that can also support policy-based initiatives not directly linked to delivery of primary care services. This resource also provide checklists based on seven regions of the world where immigrants could have come from. Similar to Canada, in 2009, Australia established guidelines on diagnosis, management and prevention of infections in recently arrived refugees through Australasian Infectious Diseases Society (ASID).<sup>68</sup>

## Conclusion

While significant research is being conducted on migrant health as it gains prominence due to the international crisis, one of the landmark results and policy directions will be from that of the 2015 study commissioned by the European Centre for Disease Prevention and Control. Migrant health and equity effectiveness methods experts from Europe, Canada, US, and Australia have teamed up to use high quality evidence-based methods to search, synthesize, and develop health recommendations for primary care, public health, and health policies affected by migration.<sup>1</sup> The global interventions described place immigrant populations and communities at the center of the interventions, highlighting the need for increased engagement of targeted communities with health systems planning, policymakers, primary care and public health stakeholders. There is no easy solution for addressing the health needs of refugees. However, the experiences from this review can be adapted and contextualized to address the dynamic and emerging need of migrants and refugees in Canada and globally.

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