Closing the gaps; improving screening and treatment for infectious diseases in migrant populations

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Human migration is rising globally and is expected to continue to rise due to global conflicts and climate change. Migration is an important driver of demographic change and has led to increasing diverse populations globally over the past 5 decades, particularly in North America, Europe, and Oceania.1 The predominant influx to these regions have been from Asia, Africa, the Middle East and Central/South America, regions with a higher prevalence of infectious disease compared to receiving regions.1 As a result, migrants (defined as individuals living in a country outside of their country of origin) make up a significant proportion of the population in Australia (29%), Canada (23%), Germany (17%), the UK (14%), the USA (14%) and the European region (13%).1 On the whole migrants are young and healthy; however, migrants from endemic countries are at increased risk of certain infectious diseases, including tuberculosis (TB), HIV, hepatitis B (HBV) and hepatitis C (HCV) and some parasitic infections such as strongyloidiasis, schistosomiasis and Chagas disease.2-4 Those affected may have associated worse health outcomes and increased mortality particularly for HIV, viral hepatitis and tuberculosis compared to the host population, exacerbated by living in poor socioeconomic conditions and barriers accessing health services.2,4 These diseases have a long latency and asymptomatic period providing an opportunity to screen and treat to prevent adverse health outcomes.

Despite the potential benefits, there are major shortfalls in the ability of health systems in high-income countries to deliver effective screening and subsequent treatment of at-risk migrant groups for most infectious diseases.5 Screening programs pre-departure and shortly after arrival primarily only focus on detecting active tuberculosis.2 Australia, Canada, New Zealand, the UK and the USA require pre-arrival screening and treatment of active tuberculosis (TB) for all immigrant applicants and have variable requirements for screening for other infectious diseases (such as HIV) and vaccination but in in a narrow subset of migrants (only resettled refugees).2 In Europe, on-arrival screening programs aim to detect active TB and only screen specific migrant groups such as refugees and asylum seekers.2,3,5 Several countries in Europe, the UK, Canada, the USA and Australia have developed guidelines for migrants after arrival for several infectious diseases to promote health, however, screening coverage is low.2,3,5 New innovative approaches and implementation strategies as well as educating practitioners to screen at-risk migrants will be required to increase screening coverage.

The study by Sequeira-Aymar et al in this theme issue on migration health in the Journal is the first attempt to use a pragmatic randomized controlled trial (RCT) design to measure the impact of multi-disease testing on the screening uptake and diagnostic rate of selected high prevalence infectious diseases among the migrant population using an innovative digital tool (IS-MiHealth) integrated into the primary care electronic medical record (EMR).6 Multi-disease screening is a promising strategy and in small studies has been found to be acceptable to migrants and has resulted in high uptake of screening.7,8 This approach supports clinical decision making because all testing is tailored and targeted and done at one timepoint and normalizes testing for individual diseases, reducing disease associated stigma7,8 Educating practitioners about screening certain risk groups for tuberculosis and viral hepatitis in the primary care setting as well as using EMR reminders has been shown to increase screening rates.9-11 The IS-MiHealth tool used in the study by Sequeira-Aymar and colleagues,6 employs an algorithm based on variables routinely collected in the EMR including age, sex and country of origin, to prompt physicians to simultaneously screen migrants for any of several infectious diseases (TB, HIV, HBV, HCV, Chagas disease, strongyloidiasis and schistosomiasis), for which they are at risk. This was a pragmatic pilot clustered-RCT between March-December 2018, among 8 primary care centres in Catalonia, Spain which were randomly allocated 1:1 to use of the digital tool for screening, or to routine care. The screening rate and diagnostic rates for each infection during the 9-month study period was compared in the 6-year prior (2012) to the intervention implementation. With the intervention, diagnostic testing and screening rate increased (OR=1.36) for any of the targeted infectious diseases and increased (OR=7.78) for any parasitic disease (conditions for which practitioners are less familiar). The absolute proportion screened for any condition increased from 12.9% to 17.5% for any infectious disease and from 0.9% to 6.3% for any parasitic infection. Given that less than 20% of those eligible for screening were screened during the study period, additional strategies in other settings to increase screening coverage will be needed. The study was limited in that it was not possible to determine if the low screening uptake was due to lack of offering screening to patients on the part of practitioners or patient refusal to be screened.

An additional barrier to implementing the IS-MiHealth tool in other countries is that data on country of origin, required for the algorithm, is not routinely collected in health datasets in more than half of all high migrant receiving countries.12 Furthermore, the US only collects data on race/ethnicity which is inadequate to capture the diversity of the foreign-born population or to inform targeted interventions.12,13 The study by Passos et al in this theme issue demonstrated the importance of collecting granular data on country of birth rather than ethnicity alone.14 In this study, more than half of 1104 patients hospitalized with community acquired SAR-CoV-2 infection were migrants. Individuals identifying as Black (aHR 1.39) and Asian (1.64) had an increased adjusted hazards of ICU admissions compared to Whites but there was significant heterogeneity within ethnic groups. Asians from Eastern Asia/Pacific [aHR (95% CI), 2.15 (1.42–3.24)] but not South Asian [0.97 (0.49–1.93)] and Black Caribbeans [1.39 (1.02–1.89)] but not Sub-Saharan Black Africans [1.37 (0.86–2.18)] had a higher risk of ICU admission. Collecting data on country of birth more precisely identifies groups who have the highest health inequities and provides more actionable health data to inform health policy and resource allocation. This is a critical data gap that needs to be filled.

Improving the impact of screening for infectious disease among migrants will require tackling the high rates of drops out along the entire care continuum.5 Patient level and structural barriers must be addressed to maximize screening uptake and to ensure linkage to care, treatment uptake and completion.5,7 These efforts must be coupled with educating providers as to which migrants to screen, and providing tools and resources to do so.6,9-11 The numerous individual level barriers include language or cultural differences, poor health literacy, competing priorities (eg, work or housing), fear of stigma or discrimination, fear of accessing care due to precarious immigration status, and lack of entitlement to free healthcare.5 These are compounded by health system barriers that include complex testing and treatment pathways, and the requirement of multiple visits to health-care facilities, often without the support of interpreters.7 The study by Knudtzen et al in this theme issue demonstrates how a community outreach program tailored to the needs of the most vulnerable undocumented migrants, many who were victims of human trafficking, can build trust and result in high uptake of health services.15 Over a 13 year period (2006-2019) among 579 patients, 820 outreach contacts (26% of all visits) were conducted primarily in their place of work or stay and increased over the study period. Moving forward, a holistic approach of providing care to migrants is now needed. Service delivery should be simplified with clinics that provide integrated care that is linguistically and culturally adapted, and with tailored outreach and education. Improving awareness and community engagement with affected communities around the benefits of early screening, catch-up vaccination, and timely health care will strengthen these efforts. With the increasing diverse populations, building migrant-friendly health systems that ensure access to care for all, regardless of legal status, will be required to limit the burden and transmission of infectious diseases.

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