

# KEY POPULATIONS BRIEF



# MOBILE POPULATIONS



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espite numerous international treaties and commitments to protect the health rights of migrants, this population still faces significant barriers in their access to TB care. Migration, which is driven by a number of complex economic, social, political and environmental factors, is a determinant of ill health, and the health outcomes of migrants are impacted by the various dimensions of the migration process. Migrants often arrive at their destination with low socioeconomic status, which makes them especially vulnerable to diseases such as TB. When accessing health care, migrants must contend with discriminatory policies and practices, poor availability of services, negative attitudes from health care workers, language barriers and stigma. TB does not stop at national borders, so policies to address TB in this population should not be constrained by local political concerns. There needs to be greater cooperation at the international level to improve TB surveillance, referrals and treatment across national health systems.

## Global Plan to End TB and key populations

The Global Plan to End TB outlines a number of key targets to be achieved by 2020, or 2025 at the latest. The plan refers to people who are vulnerable, underserved, or at risk as TB “key populations” and provides models for investment packages that will allow countries to achieve the 90–(90)–90 targets<sup>1</sup>. The Plan also suggests that all countries:

Reach at least

 **90%**

 **OF ALL PEOPLE WITH TB** and place all of them on appropriate therapy—first-line, second-line and preventive therapy as required.

As a part of this approach, reach at least

 **(90)%**

 **OF THE KEY POPULATIONS** the most vulnerable, underserved, at-risk populations.

Achieve at least

 **90%**

 **TREATMENT SUCCESS** for all people diagnosed with TB through affordable treatment services, adherence to complete and correct treatment, and social support.

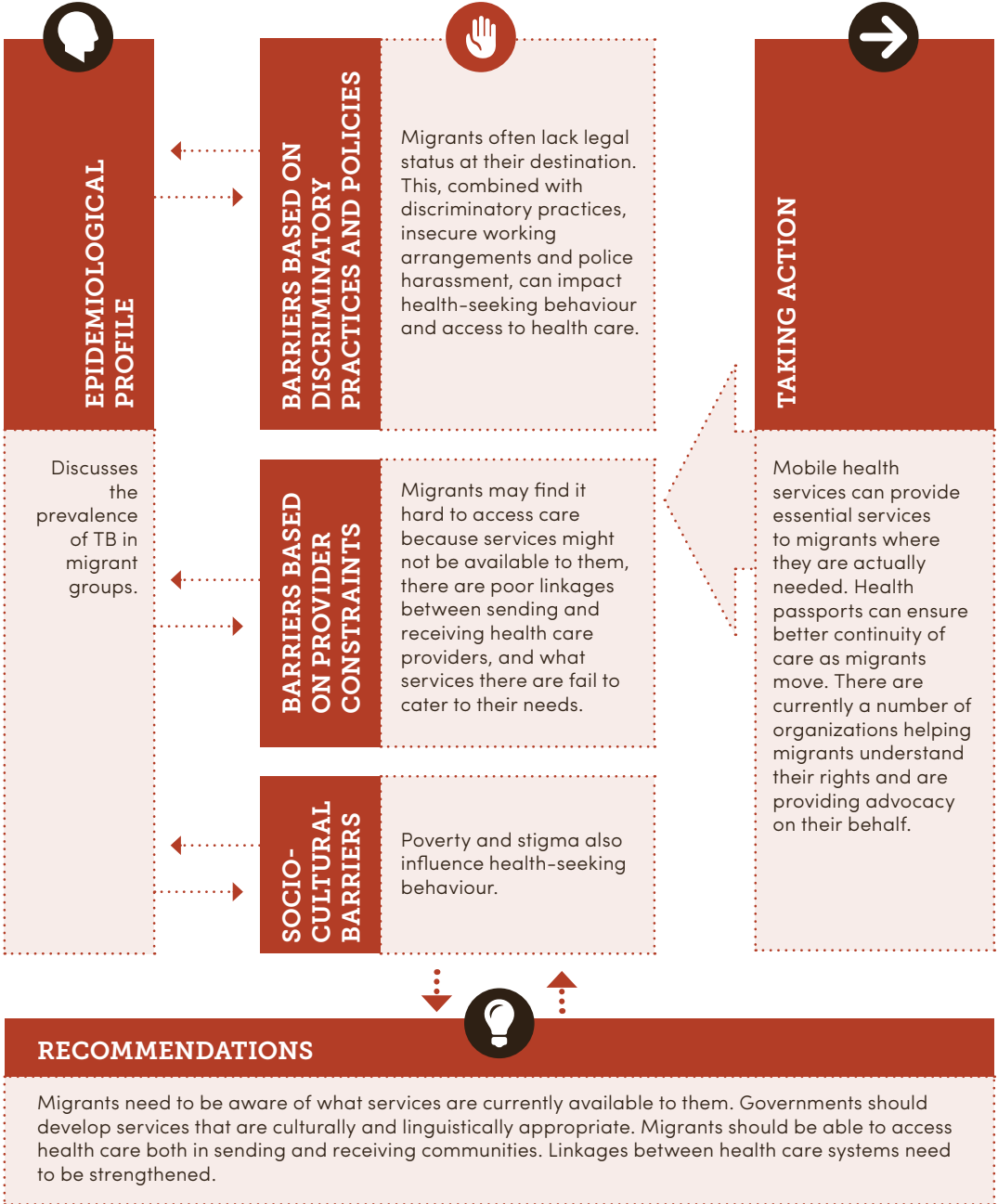
- Identify their key populations at national and subnational levels according to estimates of the risks faced, population size, and particular barriers, including human rights and gender-related barriers, to accessing TB care;
- Set an operational target of reaching at least 90% of people in key populations through improved access to services, rights-based systematic screening where required and new case-finding methods, and providing all people in need with effective and affordable treatment;
- Report on progress with respect to TB using data that are disaggregated by key population;
- Ensure the active participation of key populations in the development and delivery of services and the provision of TB care in safe and respectful environments.

This guide utilizes the above recommendations in order to outline the risks and barriers to access, discuss strategies for improved access, and highlight opportunities for involvement of migrants in all stages of programme development and service delivery.

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<sup>1</sup> The 90–(90)–90 plan calls on NTPs to aim to reach 90% of all people with TB and start them on appropriate therapy. As part of this approach, countries should be reaching 90% of key populations. The final part of the strategy is to achieve at least 90% treatment success for all people diagnosed with TB.

## What's in this guide?





## Epidemiological profile

The world's population has become increasingly mobile, and there are thought to be 1 billion migrants in the world today. Around three-quarters of migrants are internal migrants, moving within national borders, mostly from rural to urban areas (1, 2). Migrants may move voluntarily in search of better social and economic opportunities, or they may be forced to move due to factors such as war and famine in their place of origin (3). Social and economic inequalities, and discriminatory practices in immigration policies and labour markets serve to increase poor migrants' vulnerability to TB and fuel the epidemic among this key population (4, 5). The act of migration often places undue stress on migrants, and the challenges that they face during transit and upon arrival at their destination (such as the loss of social support struc-

tures, discrimination and language barriers) are often exacerbated by the presence of TB, the stigma of a positive TB diagnosis and the likely changes in lifestyle necessitated by TB treatment and care (6).

Migrants form a heterogeneous population, encompassing individuals with differing social, legal and economic statuses and motivations for moving; this makes it hard to provide a reliable picture of the TB burden in this population (7, 8). Surveillance data also vary in quality and reliability, with undocumented migrants often not included in official TB reporting in many countries (9). Most epidemiological research on TB in migrant populations has tended to focus on the movement of people from low- to high-income countries, with scant attention being paid to the migration between and within low-income countries (10). A study conducted in Sao Paulo, Brazil, found that TB cases among Bolivian migrants rose from 10% in 1998 to almost 55% in 2008, demonstrating that migration from areas of high TB incidence can still have a major impact in settings where TB incidence is already high (9).



Migration is a complex activity that takes many forms. Certain migrant populations, such as nomadic pastoralists, are more mobile than internal migrants, who generally move from rural to urban areas in search of employment opportunities and remain in their host communities for long periods of time. Many of the barriers that migrant groups face in accessing health care are a shared experience. However, certain barriers may be felt more keenly by one group over another. This guide uses existing research to present a broad picture of the impact of migration on access to TB services and specifies the challenges faced by particular groups, where information on these challenges and groups is available.

# Barriers based on discriminatory practices and policies

## Legal status of migrant at destination

The legal status of migrants at their destination has a significant impact on health-seeking behaviour. Numerous studies conducted among undocumented Latino immigrants in the United States have found that the fear of discovery by government officials decreased the likelihood of seeking health care for a range of illnesses, including TB (11–13). In many countries, health care access is often linked to residency status. For example, provision of health care in India is often dependent on being able to provide proof of citizenship, normally with a birth certificate (14). However, seasonal migrants from rural states, where birth registration rates are low, may have never been issued a birth certificate, making it hard for them to access health care at their destination (14). Although TB care in India is freely available through government health services, lack of proper documentation, coupled with a possible lack of knowledge as to the services available, can serve as a barrier to health seeking (14). Registration policies such as Hukou in China and Propiska in Russia, which tie people's access to services to their proof of residency in a particular region, can also have serious consequences for health seeking and health outcomes in migrant populations (15, 16).

## COUNTRY PROFILE:

CHINA

In China, Hukou, the household registration system introduced in the 1950s, ties people's access to government services to their residential status. As China's population has grown increasingly mobile, this system means that millions of the country's rural-to-urban migrants do not qualify for public medical insurance and assistance programmes at their destination. Instead, they are forced to pay out of pocket for medical expenses. Although people with active TB receive free government care, the direct and indirect costs of obtaining a TB diagnosis falls on the individual. These costs can either lead migrants to delay health seeking or force them back to rural areas where they can access public health care (also with high associated costs) and social support structures. Returning migrants may also bring TB back from the city to poor rural areas. Although there have been moves to reform Hukou, critics warn that millions of migrants will fall through the cracks.





## Discriminatory policies

Many governments, particularly those in low-burden, high-income countries, continue to enforce policies such as detention, deportation, and travel and work restrictions on migrants with treatable conditions, such as TB (17). Such policies serve to erode trust between health care providers and people with TB or undiagnosed TB, and may cause migrants to delay or avoid health seeking (7). The fear of deportation for migrants with unconfirmed TB and their families can lead those accessing care to either withhold their address or provide the wrong address, making contact tracing – a key component of TB control – very difficult to implement (18–20). Deportation can also increase the risk of treatment interruption, which in turn increases the likelihood of drug-resistant forms of TB (7). The table below outlines some of the additional risks associated with deportation and TB.

### DEPORTATION AND TB:

RISKS (HELDAL, KUYVENHOVEN ET AL. 2008, WHO 2014)

- It is difficult to ensure continuity of care in the country to which the person with TB is being deported. It is unlikely that health authorities in the receiving country will admit to having a substandard TB programme, and the individual with TB may face barriers even in countries with well-performing programmes.
- TB drugs that may be sent with the person with TB will often be taken without supervision, meaning there is no guarantee that treatment will be completed.
- Confidentiality laws may prevent medical information regarding the person with TB's treatment from being shared between different health systems.
- Air travel may be delayed because of international regulations.
- Migrants awaiting deportation may be held in poorly ventilated, crowded and unsanitary detention centres where diseases like TB can easily spread. TB treatment may not be available in these settings.
- Deported individuals may return illegally to the same country at a later date. Incomplete treatment could mean that they travel back with TB or even more resistant forms of TB.

## Insecure working arrangements

Internal migration in low-income countries is overwhelmingly driven by economic factors (10). Migrants, whether international or internal, often find work in the urban informal sector at their destination (21). These jobs are low-skilled, poorly paid, and typically characterized by a lack of written contracts and enforceable agreements related to benefits such as health insurance (14). The supply of work often tends to be uneven and insecure in this sector (14). Because they lack any form of legal recourse and may have no legal status at their destination, migrants are also vulnerable to predatory employers (10, 22). All of these factors have several important consequences for health-seeking behaviour and treatment adherence among poor migrant populations.



### Police harassment

Low income is significantly correlated with delayed health seeking (23). The fragile work arrangements that many migrants are subject to also impacts health seeking and treatment adherence, with job loss common following a positive TB diagnosis (24). Even if the individual with TB is able to continue working, TB treatment often interferes with unpredictable work schedules (24). Loss of income following a positive TB diagnosis is aggravated by additional expenses that the individual may incur, such as transportation costs to and from treatment facilities (24). Migrant workers in the informal sector who are able to access TB care are particularly vulnerable to treatment abandonment because of pressures to return to work once they notice improvement in their health (25).

Rural-to-urban migration in many low-income countries has contributed to urban congestion and housing shortages (14). This can often lead to conflicts between local populations and migrant groups, with the former viewing the latter as a drain on public services and local amenities and as competition in the labour market (14). Although migration can bring many economic benefits to the host and sending communities, it is often viewed as a problem by local authorities and the police (14). Migrants are especially vulnerable to police harassment due to their low socioeconomic status and lack a legal status in the receiving society (14). Access to basic services can often depend on local police, with migrants often having to bribe corrupt officials in order to receive health care and housing (14).

## Barriers based on provider constraints

### Availability of health services

Access to health care, including TB diagnostic and treatment services, is typically poorer in migrant populations than in host populations (26). Migrants in low-income countries who move for economic reasons often live in urban slums and other informal settlements. Public health care availability is often low in these settings (27). Lack of awareness of free diagnosis and treatment services, perceived poor quality of care at government centres, cost of travel, missed income opportunities, language and stigma also pose barriers to the uptake of government provided services (28, 29). Migrants can also feel a sense of alienation from public health systems in their host communities, which could also present a barrier to the uptake of available services (30). The informal private, for-profit sector is the first point of contact for most slum dwellers presenting with TB symptoms (28, 29, 31). TB diagnosis, treatment and care is often suboptimal in this sector, contributing to increased risk of drug-resistant infections, such as multidrug-resistant TB (MDR-TB) (32).

An important group often overlooked in TB prevention efforts is the mobile nomadic population. Factors such as animal husbandry, the consumption of unpasteurized milk, malnutrition, and poorly ventilated, overcrowded dwellings all converge to increase the risk of TB transmission among nomadic pastoralists (33, 34). Health-seeking behaviour is thought to be particularly low among this population, with individuals with TB symptoms often seeking care from traditional healers before presenting to public health facilities (34, 35). A study conducted among nomadic pastoralists in Ethiopia found that health seeking for individuals with TB symptoms could be delayed by as much as two years (35). Limited knowledge of TB and the distance to the nearest health facility were found to be the main barriers to health seeking and access among this population (35, 36).





## REACHING NOMADS IN ADAMAWA, NIGERIA

A programme among nomadic pastoralists in Nigeria used awareness-raising activities, such as radio adverts and active case finding, to achieve a 112% increase in the number of people presenting for TB testing and an almost 50% increase in new smear-positive notifications (34).

### Continuity of care

Continuity of care is especially problematic for highly mobile populations, who may start treatment in one location and have to continue it elsewhere. Seasonal migration, whereby a migrant moves away for a short period of time – often to work – before returning home, reduces treatment adherence, and thus contributes to the development of MDR-TB and the spread of the disease to rural, labour-supplying regions (22). In India, migration is thought to be responsible for a quarter of all TB treatment loss to follow-up (22). The situation is arguably more pronounced among migrant miners in southern Africa. Mine workers in South Africa have the highest rates of TB in the world (37). Although miners may have access to TB care at larger mines, continuity of care, adherence support and access to diagnostic facilities might not be available once they return home to low-resource rural settings (38). Miners also often receive multiple treatment episodes with inappropriate therapy and high default rates, which can result in increased drug-resistance (38). Poor linkages and information sharing between health services in different locations can also have an impact on treatment adherence (7).



Continuity of care can be especially problematic in mobile populations such as refugees and internally displaced persons (IDPs), who are forcibly displaced as a result of environmental disaster, political insecurity and armed conflict (39). Most refugees and IDPs are fleeing from and staying in countries with an existing high burden of TB (40). A number of crisis-associated risk factors, such as malnutrition, overcrowding in refugee camps and other settlements, and the interruption of treatment and access to health care, can impact the spread of TB in these populations (39, 40). TB treatment interruptions experienced by refugees and IDPs can increase the risk of drug resistance and the development of MDR-TB (40). Funding constraints imposed by international donor organizations may mean that host communities are unable to offer TB treatment to incoming refugees crossing national borders without negatively impacting their own future national TB budgets (39).

### Attitudes of health care workers

Health worker stereotyping and prejudice towards migrant populations has been shown to influence behaviour during patient interaction and the medical decision-making process, particularly in terms of diagnosis and treatment options (20, 41). Migrants accessing health services perceive these negative attitudes, which can affect their level of satisfaction with the services received. This can lead to poor compliance with treatment and delayed health seeking (41). Having a positive relationship with health care professionals has been shown to be an important component of TB treatment success (42).



## Language and cultural barriers in health care settings

Proficiency in the local language can also impact the likelihood of care seeking, the quality of care migrants receive, and treatment adherence and success (43, 44). Migrants not proficient in the local language may find it difficult to fully explain their health concerns to medical professionals (44). In turn, health professionals sometimes take less detailed medical histories and ignore complex underlying illnesses because of these language barriers (45, 46). A study in Canada found that migrants who did not speak English were often uncomfortable using public transport, making them less likely to seek care if they had to travel to access it (44). Migrants with limited local language proficiency have often reported lower levels of satisfaction with the care they receive and a more limited understanding of their medical condition (43). Treatment adherence can also be affected by language barriers, as instructions on dosing, timing and side-effects can be missed (43). Health services in less resource-constrained settings can often afford to employ translators, but even the use of this service in TB care can be problematic due to the sensitivity and stigma surrounding the disease (19). Cultural beliefs vary between different migrant populations, which may impact people's health-seeking behaviour and how they prefer to interact with health services (47).

## Sociocultural barriers to treatment

### Poverty

The “healthy migrant hypothesis” states that migrants often arrive in better health than the population at the destination location (48). When it is not forced, migration is usually self-selecting, as migrants have to be healthy enough to deal with the various stresses and physical demands of travel (48). Migrants are also sometimes screened for various infectious diseases as a condition of being granted legal status at their destination (48). However, the health of migrants is thought to deteriorate upon arrival, particularly in poor urban settings (49, 50) Although the social and economic determinants of TB are not exclusive to urban environments, the poverty and overcrowding that characterize rapid urban growth in many parts of the world do impact TB incidence (51). Migrant health is of particular concern in cities because the conditions under which many migrants live, travel and work leave them vulnerable to diseases such as TB (1). As already stated, a key characteristic of urban poverty is low and unstable incomes, which can impact health-seeking behaviour and treatment adherence, especially if indirect and direct

health care expenses have to be paid out of pocket (52–54). A positive TB diagnosis often has far-reaching consequences, such as loss of income and eviction, which can lead to further socioeconomic marginalization (55, 56).

### Stigma

Migrants, especially those moving from low-income to high-income countries, are often portrayed as a “diseased other”, spreading infection to local populations and burdening local health care systems (57). This is a politically expedient, but somewhat misleading representation. TB disproportionately affects vulnerable groups, such as immigrants from countries where TB incidence is high, and incidence rates tend to be significantly higher in these foreign-born populations than in local-born populations (6, 51, 58, 59). In low-burden settings, transmission beyond immigrant communities to local-born populations is rare (6, 57). The stigmatization, xenophobia and racism felt by many migrants serve to increase their marginalization and decrease the likelihood of them using available health services (18).



## Taking action

The 2013 World Health Assembly outlined four key priority areas around which it has urged member nations to mobilize (8, 17): better monitoring of migrant health by collecting better surveillance data; the development of policy and legal frameworks that include non-health sectors; the development of migrant-sensitive health systems; and the establishment of networks and cross-border partnerships. Meeting these objectives is crucial to improving the health of migrant populations all over the world, but there are some more local-level initiatives worth considering:

### Mobile health services

For mobile populations who often lack access to health services, mobile clinics can offer an effective means of delivering TB care. Mobile clinics can be used to access hard to reach populations, such as refugees, nomadic pastoralists and urban slum dwellers (60). Mobile TB diagnostic stations can also reduce the length of time between screening and diagnosis, meaning vulnerable populations can start TB treatment sooner. Mobile vaccination clinics and services providing pre- and postnatal care also provide excellent opportunities to engage with women and children, who often exist as vulnerable populations within already vulnerable populations (61).



### Health passports

Highly mobile populations, such as nomads and seasonal workers, are often lost to follow-up if they cannot access care in their sending or receiving locations. Poor linkages and lack of information sharing between different health facilities, often within the same country, can impact treatment adherence. mHealth technology can be utilized to better share information (62). However, such technologies are sometimes unavailable in low-resource facilities where electricity supply is unstable and alternative sources of electricity can be very expensive (62). Some facilities where people with TB, for example nomadic pastoralists, access care may also be out of reach of internet or cellular network coverage (62). Physical health passports allow the migrant to carry their treatment information with them and enable receiving clinicians to continue them on the appropriate treatment. Health passports can also be issued in conjunction with counselling sessions for people with TB preparing to travel as to where they can receive treatment in their host communities and how their treatment regimens may change. Health passports have been successfully implemented for migrants living with HIV/AIDS accessing antiretroviral therapy (ART) and could be adapted for people with TB (63).



### Welfare services and social protection schemes for migrants

Migrants often arrive at their destination lacking basic social protections. Aajeevika, a non-governmental organization (NGO) in India, operates walk-in centres in both sending and receiving communities, providing basic support to migrants. For example, migrants are given help in making sure that they have the correct documentation needed to access health care services at their destination.

### Unionizing migrant workers

PRAYAS, a labour action NGO in India, has worked with different migrant worker groups (such as construction workers and brick makers) to help them unionize and demand wage increases from their employers. Unionizing can also help migrant workers to advocate for expanded access to health services, days off to pursue treatment, and other benefits. The Migrant Workers Rights Network (MWRN) is an advocacy group working with migrant workers from Myanmar in Thailand. The group is involved in promoting access to justice, raising awareness about migrant rights, providing support to migrants in labour disputes and advocating for policy change at the national level.

### Conditional cash transfers and financial incentives for health-seeking behaviour

TB is a disease of poverty, and a positive diagnosis can exacerbate the impacts of poverty. Conditional cash transfers can mitigate the economic shock of a positive TB diagnosis, improving health-seeking behaviour and treatment adherence (64–67). A study in China also found that the use of financial incentives had a positive impact on TB treatment adherence among rural-to-urban migrants (67).

### Education and advocacy against punitive policies

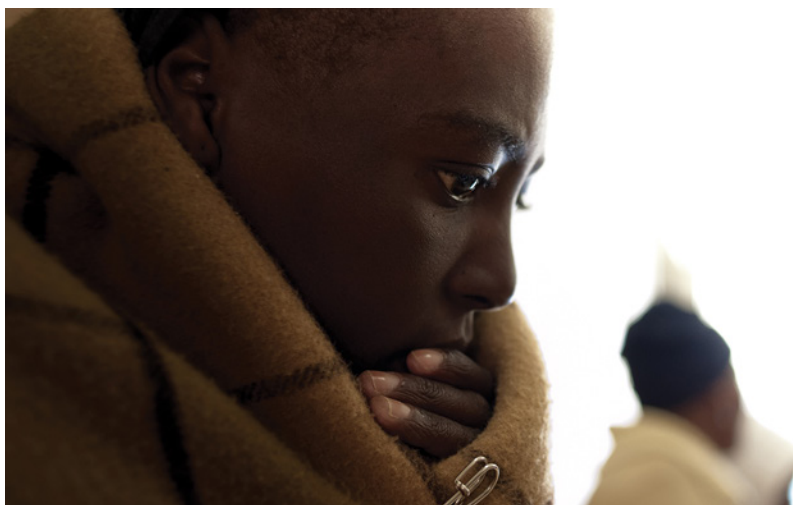
Civil society and migrant protection and rights organizations can also advocate for adequate access to health care for migrant populations, conduct TB educational campaigns among migrants, and campaign to repeal harmful practices such as being detained prior to deportation without access to treatment. Receiving communities need to be educated as to the benefits that migrants can bring to local economies.



## Recommendations

While these recommendations provide an outline for action for a range of key stakeholders, others, including UN Agencies and local and global health worker collectives, should take note and assess their potential for use in improving TB prevention, treatment and care in migrant populations.

Civil Society	Migrants Living with TB	National/Regional Governments	Donor Community
Help raise awareness of services available to migrants; hold governments and the various government agencies needed to implement this system (immigration, labour) accountable in order to ensure shared data remain confidential and are not used to discriminate against migrant groups;	Document instances of discrimination and pursue justice with the help of civil advocacy groups;	Create a unified referral system for migrants that allows for improved contact tracing and continuity of care;	Facilitate dialogue between national and regional governments; implement standards and guidelines for a unified system;
Help inform the development of appropriate services through consultation with migrant groups; help raise awareness of services available to migrants;	Provide input as to what services are required and help identify where current systems fail migrants with TB;	Ensure the delivery of health services that are linguistically and culturally appropriate;	Put pressure on national governments to ensure that services delivered are linguistically and culturally appropriate;
Help national governments identify migrant groups, and work with organizations in other countries to improve cross-border collaboration on migrants;	Conduct service mapping, and help to collect and share information on services that are available;	Improve TB surveillance data on migrant populations; ensure that these data are shared with other national governments;	Facilitate the coordination between national governments; provide funding to ensure that data are collected at all levels of national health systems;



Civil Society	Migrants Living with TB	National/Regional Governments	Donor Community
<p>Pressure governments to remove discriminatory policies through targeted advocacy and the documentation of cases of discrimination against migrants and the negative impacts of policies on migrant health and general public health outcomes;</p>	<p>Document instances of discrimination and pursue justice with the help of civil advocacy groups;</p>	<p>Remove discriminatory practices and other barriers that deter health seeking among migrant populations, such as requirements to only receive treatment in home region or country; revise policies that promote deportation and detention upon discovery of illegal status and/or TB;</p>	<p>Pressure governments to remove discriminatory policies; fund documentation and targeted advocacy for migrant health;</p>
<p>Help raise awareness about services available to migrants; put pressure on international donor organizations to revise funding models;</p>	<p>Lobby donor organizations to change existing funding models;</p>	<p>Provide TB care to all, regardless of legal status;</p>	<p>Allow for more flexible funding mechanisms to allow NTPs to treat migrants and refugees without adversely impacting national TB budgets;</p>
<p>Pressure governments to collect better data on different migrant groups.</p>	<p>Work with governments to help identify different migrant groups and mobile populations.</p>	<p>Improve data on different migrant groups and mobile populations; improve surveillance of TB within these groups.</p>	<p>Pressure governments to collect better data on different migrant groups; fund data collection efforts.</p>

## References

- Schultz C. Migration, health and urbanization: interrelated challenges. Geneva: International Organization for Migration; 2014 ([https://www.iom.int/sites/default/files/our\\_work/ICP/MPR/WMR-2015-Background-Paper-CSchultz.pdf](https://www.iom.int/sites/default/files/our_work/ICP/MPR/WMR-2015-Background-Paper-CSchultz.pdf), accessed 28 October 2015).
- Tuberculosis prevention and care for migrants. Geneva: World Health Organization; 2014 ([http://www.who.int/tb/publications/WHOIOM\\_TBmigration.pdf](http://www.who.int/tb/publications/WHOIOM_TBmigration.pdf), accessed 28 October 2015).
- Chowdhury IA, Haque N, Kamal MM, Islam T, Khan MM, Islam MN, et al. Internal migration and socio-economic status of migrants: a study in Sylhet City, Bangladesh. *American Journal of Human Ecology*. 2012;1(4):123–33.
- Long Q, Li Y, Wang Y, Yue Y, Tang C, Tang S, et al. Barriers to accessing TB diagnosis for rural-to-urban migrants with chronic cough in Chongqing, China: a mixed methods study. *BMC Health Services Research*. 2008;8(1):202.
- Migration and tuberculosis: a pressing issue. Geneva: International Organization for Migration; 2013 (<http://www.iom.int/files/live/sites/iom/files/What-We-Do/docs/Migration-Tuberculosis-A-Pressing-Issue.pdf2013b>, accessed 29 October 2015).
- Abarca Tomás B, Pell C, Bueno Cavanillas A, Guillén Solvas J, Pool R, Roura M. Tuberculosis in migrant populations: a systematic review of the qualitative literature. *PLoS One*. 2013;8(12):e82440.
- Heldal E, Kuyvenhoven J, Wares F, Migliori G, Ditiu L, Fernandez De La Hoz K, et al. Diagnosis and treatment of tuberculosis in undocumented migrants in low- or intermediate-incidence countries [Workshop report]. *Int J Tuberc Lung Dis*. 2008;12(8):878–8.
- Dhavan P, Mosca D. Tuberculosis and migration: a post-2015 call for action. *Migration Policy Practice*. 2014;4(1):17–23.
- Martinez VN, Komatsu NK, De Figueredo SM, Waldman EA. Equity in health: tuberculosis in the Bolivian immigrant community of São Paulo, Brazil. *Trop Med Int Health*. 2012;17(11):1417–24.
- Schaaf HS, Zumla A. Tuberculosis: a comprehensive clinical reference. Philadelphia: Elsevier Health Sciences; 2009.
- Asch S, Leake B, Gelberg L. Does fear of immigration authorities deter tuberculosis patients from seeking care? *West J Med*. 1994;161(4):373–6.
- Berk ML, Schur CL. The effect of fear on access to care among undocumented Latino immigrants. *J Immigr Health*. 2001;3(3):151–6.
- Nandi A, Galea S, Lopez G, Nandi V, Strongarone S, Ompad DC. Access to and use of health services among undocumented Mexican immigrants in a US urban area. *Am J Public Health*. 2008;98(11):2011.
- Abbas R, Varma D. Internal labor migration in India raises integration challenges for migrants. Washington, DC: Migration Policy Institute (MPI); 2014.
- Hu X, Cook S, Salazar MA. Internal migration and health in China. *Lancet*. 2008;372(9651):1717–9.
- Bovt G. The Propiska sends Russia back to the U.S.S.R. The *Moscow Times*. 17 January 2013.
- Mosca D, Rikks B, Schultz C. Health in the post-2015 development agenda: the importance of migrants' health for sustainable and equitable development. In: Laczko FL, Lars Johansson, editors. *Migration and the United Nations Post-2015 Development Agenda*. Geneva: International Organization for Migration; 2013.
- Coreil J, Lauzardo M, Heurtelou M. Cultural feasibility assessment of tuberculosis prevention among persons of Haitian origin in South Florida. *J Immigr Health*. 2004;6(2):63–9.
- Kulane A, Ahlberg BM, Berggren I. "It is more than the issue of taking tablets": the interplay between migration policies and TB control in Sweden. *Health Policy*. 2010;97(1):26–31.
- Huffman SA, Veen J, Hennink MM, McFarland DA. Exploitation, vulnerability to tuberculosis and access to treatment among Uzbek labor migrants in Kazakhstan. *Soc Sci Med*. 2012;74(6):864–72.
- Mishra P, Agrawal P. Urban poverty as a spillover of rural poverty: an empirical study with special reference to migration and job opportunities. *Int J Multidiscipl Res*. 2012;2(3):105–32.
- Borhade A. Migrants' (denied) access to health care in India. *Human Development in India*; 2012.
- Cai J, Wang X, Ma A, Wang Q, Han X, Li Y. Factors associated with patient and provider delays for tuberculosis diagnosis and treatment in Asia: a systematic review and meta-analysis. *PLoS One*. 2015;10(3):e0120088.
- Sagbakken M, Frich JC, Bjune G. Barriers and enablers in the management of tuberculosis treatment in Addis Ababa, Ethiopia: a qualitative study. *BMC Public Health*. 2008;8:11.
- Yaccino S. *Fighting tuberculosis in India's slums*. Chicago: The University of Chicago; 2014 (<http://harris.uchicago.edu/news-and-events/features/alumni-profile/fighting-tuberculosis-indias-slums>, accessed 29 October 2015).

26. Zammarchi L, Bartalesi F, Bartoloni A. Tuberculosis in tropical areas and immigrants. *Mediterr J Hematol Infect Dis.* 2014;6(1):e2014043.
27. Fotso JC, Mukiira C. Perceived quality of and access to care among poor urban women in Kenya and their utilization of delivery care: harnessing the potential of private clinics? *Health Policy Plan.* 2012;27(6):505–15.
28. Sharma N, Taneja D, Pagare D, Saha R, Vashist R, Ingle G. The impact of an IEC cam-paign on tuberculosis awareness and health seeking behaviour in Delhi, India. *Int J Tuberc Lung Dis.* 2005;9(11):1259–65.
29. Suganthi P, Chadha V, Ahmed J, Umadevi G, Kumar P, Srivastava R, et al. Health seek-ing and knowledge about tuberculosis among persons with pulmonary symptoms and tuberculo-sis cases in Bangalore slums. *Int J Tuberc Lung Dis.* 2008;12(11):1268–73.
30. Borhade A. Health of internal labour migrants in India: some reflections on the current situation and way forward. *Asia Europe Journal.* 2011;8(4):457–60.
31. Mili D. Migration and healthcare: access to healthcare services by migrants settled in Shivaji Nagar Slum of Mumbai, India. *The Health.* 2011;2(3):82–5.
32. TB in India 2014. TB-Facts.org; 2014 (<http://www.tbfacts.org/tb-india/>, accessed 30 Oc-tober 2015, accessed 28 October 2015).
33. TB REACH spotlight: Nomadic tribe in Nigeria makes significant gains in TB case de-tection. Geneva: Stop TB; 2014 ([http://www.stoptb.org/news/stories/2014/ns14\\_056.asp](http://www.stoptb.org/news/stories/2014/ns14_056.asp), ac-cessed 30 October 2015).
34. John S, Gidado M, Dahiru T, Fanning A, Codlin A, Creswell J. Tuberculosis among no-mads in Adamawa, Nigeria: outcomes from two years of active case finding. *Int J Tuberc Lung Dis.* 2015;19(4):463–8.
35. Gele AA, Bjune G, Abebe F. Pastoralism and delay in diagnosis of TB in Ethiopia. *BMC Public Health.* 2009;9(1):5.
36. Legesse M, Ameni G, Mamo G, Medhin G, Shawel D, Bjune G, et al. Knowledge and perception of pulmonary tuberculosis in pastoral communities in the middle and Lower Awash Valley of Afar region, Ethiopia. *BMC Public Health.* 2010;10(1):187.
37. Tuberculosis in South Africa's gold mines: a united call to action. London: Results; 2013.
38. Stuckler D, Basu S, McKee M, Lurie M. Mining and risk of tuberculosis in Sub-Saharan Africa. *Am J Public Health.* 2011;101(3):524.
39. Cain KP, Marano N, Kamene M, Sitienei J, Mukherjee S, Galev A, et al. The movement of multidrug-resistant tuberculosis across borders in East Africa needs a regional and global so-lution. *PLoS Med.* 2015;12(2):e1001791–e.
40. Kimbrough W, Saliba V, Dahab M, Haskew C, Checchi F. The burden of tuberculosis in crisis-affected populations: a systematic review. *Lancet Infect Dis.* 2012;12(12):950–65.
41. Dias S, Gama A, Cargaleiro H, Martins MO. Health workers' attitudes toward immigrant patients: a cross-sectional survey in primary health care services. *Hum Resour Health.* 2012;10(14).
42. McEwen MM. Mexican immigrants' explanatory model of latent tuberculosis infection. *J Transcult Nurs.* 2005;16(4):347–55.
43. Derose KP, Escarce JJ, Lurie N. Immigrants and health care: sources of vulnerability. *Health Affairs.* 2007;26(5):1258–68.
44. Asanin J, Wilson K. "I spent nine years looking for a doctor": exploring access to health care among immigrants in Mississauga, Ontario, Canada. *Soc Sci Med.* 2008;66(6):1271–83.
45. Bischoff A, Bovier PA, Isah R, Francoise G, Ariel E, Louis L. Language barriers between nurses and asylum seekers: their impact on symptom reporting and referral. *Soc Sci Med.* 2003;57(3):503–12.
46. Suphanchaimat R, Kantamaturapoj K, Putthasri W, Prakongsai P. Challenges in the pro- vision of healthcare services for migrants: a systematic review through providers' lens. *BMC Health Services Research.* 2015;15(1):390.
47. van der Oest C, Chenhall R, Hood D, Kelly P. Talking about TB: multicultural diversity and tuberculosis services in Waikato, New Zealand. *NZ Med J.* 2005;118:1216.
48. Lu Y. Test of the 'healthy migrant hypothesis': a longitudinal analysis of health selectivi-ty of internal migration in Indonesia. *Soc Sci Med.* 2008;67(8):1331–9.
49. Experiences of Gomda in Sweden: exclusion from health care for immigrants living without legal status. Stockholm: Médecins Sans Frontières; 2005.
50. Hesketh T, Jun YX, Lu L, Mei WH. Health status and access to health care of migrant workers in China. *Public Health Reports.* 2008;123(2):189.
51. Van Hest N, Aldridge R, De Vries G, Sandgren A, Hauer B, Hayward A, et al. Tubercu-losis control in big cities and urban risk groups in the European Union: a consensus statement. *Euro Surveill.* 2014;19(9):pii;20728.



52. Hong Y, Li X, Stanton B, Lin D, Fang X, Rong M, et al. Too costly to be ill: health care access and health seeking behaviors among rural-to-urban migrants in China. *World Health Pop-ul.* 2006;8(2):22–34.
53. Zuñiga JA. Medication adherence in Hispanics to latent tuberculosis treatment: a literature review. *J Immigr Minor Health.* 2012;14(1):23–9.
54. Tacoli C, McGranahan G, Satterthwaite D. Urbanisation, rural-urban migration and urban poverty. International Institute for Environment and Development; 2014 (<http://pubs.iied.org/10725IIED.html>, accessed 29 October 2015).
55. Ho M-J. Sociocultural aspects of tuberculosis: a literature review and a case study of im-migrant tuberculosis. *Soc Sci Med.* 2004;59(4):753–62.
56. Kirwan DE, Nicholson BD, Baral SC, Newell JN. The social reality of migrant men with tuberculosis in Kathmandu: implications for DOT in practice. *Trop Med Int Health.* 2009;14(12):1442–7.
57. Littleton J, Park J, Thornley C, Anderson A, Lawrence J. Migrants and tuberculosis: ana-lysing epidemiological data with ethnography. *Aust N Z J Public Health.* 2008;32(2):142–9.
58. Lönnroth K, Migliori GB, Abubakar I, D'Ambrosio L, De Vries G, Diel R, et al. Towards tuberculosis elimination: an action framework for low-incidence countries. *Eur Respir J.* 2015;45(4):928–52.
59. Odone A, Tillmann T, Sandgren A, Williams G, Rechel B, Ingleby D, et al. Tuberculosis among migrant populations in the European Union and the European Economic Area. *Eur J Public Health.* 2015;25(3):506–12.
60. Mobile clinics to extend the reach of tuberculosis care. Geneva: The Global Fund; 2013.
61. Outside the hospital walls: mobile clinics in Kabul, Afghanistan. Geneva: Médecins Sans Frontières; 2013.
62. mHealth to improve TB care. Geneva: Stop TB; 2012.
63. Providing antiretroviral therapy for mobile populations: lessons learned from a cross bor-der ARV program in Musina, South Africa. Cape Town. Geneva: Médecins Sans Frontières; 2012.
64. Attanasio O, Gómez LC, Heredia P, Vera-Hernandez M. The short-term impact of a con-ditional cash subsidy on child health and nutrition in Colombia. Report summary: Familias. 2005;3.
65. Fenwick TB. Avoiding governors: the success of Bolsa Familia. *Latin American Re-search Review.* 2009;44(1):102–31.
66. Hargreaves JR, Boccia D, Evans CA, Adato M, Petticrew M, Porter J. The social deter-minants of tuberculosis: from evidence to action. *Am J Public Health.* 2011;101(4):654–62.
67. Wei X, Zou G, Yin J, Walley J, Yang H, Kliner M, et al. Providing financial incentives to rural-to-urban tuberculosis migrants in Shanghai: an intervention study. *Infect Dis Poverty.* 2012;1:9.

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