HIV in Migrant Populations 2

Interventions to ensure access to and continuity of HIV care for international migrants: an evidence synthesis

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International migrants, especially those belonging to key populations, face a considerable HIV burden. However, continuity of HIV care for this group is often challenged along the migration route. We assess the available evidence on the existing interventions that aim to strengthen community and health systems to ensure the continuity of HIV care for international migrants. We did a systematic search of PubMed for publications from 1989 until 2023 focused on different stages of the HIV care continuum regardless of the geographical region. The literature was reviewed with a thematic approach. Globally, legal regulations can restrict access to HIV care and fuel fear of deportation among undocumented migrants. The intersection of HIV-related and migration-related stigma creates further challenges for uninterrupted access to HIV care along the migration route, with negative clinical and public health consequences. Different potential interventions were identified including: provision of HIV care regardless of migration status; utilisation of mobile health, mobile units, and community-led initiatives to bring HIV care to migrants; and utilisation of participatory and co-creation methods to develop tailored and sustainable HIV-related interventions with migrant communities. Improving access to the continuity of care for migrants requires a shift towards intersectional policies rooted in co-creation approaches to address the underlying multiple and mutually reinforcing inequalities.

Introduction

International migrants, although hugely diverse, are globally recognised as being vulnerable to HIV. Yet, migrants continue to have suboptimal access to HIV care in comparison with local-born communities.[1–3] This issue includes reduced access to prevention, diagnosis, linkage to care, and antiretroviral therapy (ART), which leads to higher acquisition risk, lower testing coverage, lower viral suppression rate, and increased mortality.[4] For instance, 48% of all diagnosed HIV cases in the EU and European Economic Area (EU/EEA) in 2022 were among migrants,[5] who face multiple obstacles when accessing HIV care.[6] Research from border areas that are characterised by frequent mobility, such as between Zimbabwe and South Africa,[7] Mexico and the USA,[8] countries of central Asia and Russia,[9] and Thailand and Myanmar[10] has highlighted the increased likelihood of HIV acquisition and transmission among highly mobile communities, such as labour migrants. The same studies elaborate that these mobile communities face legal, economic, social, and cultural barriers that prevent access to HIV care.[7–10] The definition of HIV care in this

Key messages

- International migrants face major intersecting barriers to accessing continuous HIV care along the migration route in departure, transition, and destination countries
- Experiences with different health-care systems, stigma related to migration status, HIV, racialised background, gender, policies, and health system infrastructures shape migrants' access to HIV care
- Undocumented migrants are particularly disadvantaged when accessing HIV care due to discriminatory policies in some countries, leading to stigma and fear of deportation.
- Universal health coverage, regardless of migration status, is essential to ensure equitable access to HIV care and to reach the Sustainable Development Goals
- Health-care interventions aiming to strengthen community and health systems must consider intersectional vulnerabilities that determine an individual's access to HIV care
- Voluntary HIV testing outside health-care settings and cross-border cooperation can improve access to continuous HIV prevention and care and reduce stigma
- Training health professionals in migrant-sensitive and culturally competent care and implementing peer support programmes at both the community and health system level can increase access to HIV care for migrants
- Community engagement, outreach programmes, and participatory methodologies focused on co-production and co-development of tailored interventions are crucial for effective HIV prevention and care strategies
- More granular and disaggregated data rooted in intersectional approaches are needed to address the diverse challenges faced by migrant populations and to inform effective policies and interventions

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review includes continuous access to HIV services including testing, diagnosis, linkage to care and treatment, and viral suppression. Where relevant, individual aspects of HIV care are specified.

Migration can intensify existing structural inequalities that position people as vulnerable for acquiring HIV and reduce their access to HIV care and prevention programmes.[11] Such structural inequalities are aggravated due to the intersection of both HIV and migration-related stigma, discrimination, and other multi-layered factors, such as socioeconomic inequalities, racialised background, and gender inequalities. For example, research among migrant sex workers documented multiple layers of stigma, violence, coercion into unprotected sex, and discrimination.[12,13] Being undocumented has been reported to intensify HIV risk factors among migrants both in transit[14,15] and destination countries,[16] increasing the risk of violence and exploitation. Furthermore, an elevated risk of late HIV diagnosis, and the associated risk of advanced HIV disease and associated mortality have been connected with structural barriers to timely HIV testing including poverty and restricted access to care based on migration status.[17,18] These intersections between the diverse social, cultural, gender, and ethnic characteristics of migrants and the contexts in which they live not only influence HIV acquisition and access to HIV care, but also aggravate these outcomes synergistically.

The Review is informed by intersectionality theory to highlight how social categories, such as racialised background, gender, and sexual identity create overlapping and interdependent systems of discrimination and social exclusion.[19] Research on HIV shows the importance of studying HIV-related stigma not only as a self-standing phenomenon but rather as intersecting with racism, sexism, homophobia, and transphobia to highlight the scope of different vulnerabilities experienced by people living with HIV.[20] In addition, in the context of migration, migration status might intersect with other social categories, such as sexual identity, adding an additional layer of vulnerability that might shape people's exposure to health risks as well as their access to health care in a synergistic and multiplicative way.[21] Approaching questions related to HIV care and migration through the prism of intersectionality allows us to draw attention to the structural and systemic factors that shape health inequalities.

Migration is a common phenomenon and will remain an important health determinant when attempting to successfully strengthen health systems, including the access to continuity of HIV care.[11,22] The objectives of this Review are to answer two questions: how to ensure continuity of HIV care for migrants at the global level; and what type of interventions are required at both the health system and community level to ensure that diverse migrant populations have equitable and uninterrupted access to HIV care?

We review available evidence on access to and continuity of HIV care among international migrants globally. We also review existing strategies for designing and strengthening health interventions aiming to improve health systems and ensure migrants' access to HIV care in non-emergency contexts. This review focuses on migrants who are not aware of their HIV status but are either infected with or are vulnerable to acquiring HIV, and migrants who know their positive status and require linkage and adherence to HIV treatment. For the definition of a migrant, we adopted the definition of the International Organization for Migration, which describes international migrants as any people who changed their place of usual residence and moved "across an international border to a country of which they are not nationals", excluding movements for "recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimages".[23] Specifically, we focused on non-emergency and acute international migration, which we defined as cross-border non-humanitarian migration, such as labour migration and family reunion, including documented and undocumented people. For a review on continuity of HIV care for migrants in emergency contexts please see Series paper 1 by CP Cortes and colleagues.[24]

The HIV care cascade framework—from HIV testing to viral suppression—has been widely used to assess continuity of care. However, in this Review we analysed the findings thematically to recognise that a linear depiction of HIV care does not capture the complex cycle of entry and re-entry into care that has been commonly reported, specifically for mobile populations.[25–27] We first outline the challenges related to access and continuity of HIV care that migrants face along their migration trajectory. Next, we focus on the role and effect of migration status on access to and continuity of HIV care. Finally, we present a synthesis of interventions and recommendations for strengthening policy, health systems, and community engagement to improve the continuity of and access to HIV care for migrants.

Challenges in accessing HIV care along the migration trajectory

The migration trajectory, including a pre-migration period in departure countries and transition periods before arriving at destination countries, presents HIV-related risks for migrants. Along this trajectory, migrants are likely to face different risk-inducing social, physical, political, and economic environments. Migrants' departure countries might contribute to their overall determinants of HIV including specific vulnerabilities, practices around safer sex, and health-care seeking. For instance, migrants arriving from countries with a patriarchal culture where sex is considered a taboo, such as Afghanistan, have been reported to experience a high burden of gender-related stigma associated with a high likelihood of acquiring HIV and delayed testing.[28]

Experiences and familiarity with health-care systems in departure countries might also shape migrants' practices around seeking HIV care in transition or destination countries. Reports show that migrants who have a possibility to visit their departure countries, such as seasonal labour migrants, prefer to access health-care systems there due to lower costs and familiarity.[29] In addition, for some migrants, such as undocumented migrants, seeking care in their countries of departure might be the only practical opportunity to access HIV care.[13,30] For example, undocumented labour migrants from Malawi in South Africa,[29] and from Tajikistan in Russia[31] tend to get HIV testing when returning to their departure countries mainly due to fear of detention and deportation in the destination countries. Moreover, both documented and undocumented labour migrants, when aware of their HIV-positive status, have been reported to access ART from their departure countries either through their social networks who send ART by couriers or by obtaining several months of supplies before leaving for work to another country.[29] Although supporting access to HIV care for some, these practices also create risks for delayed HIV diagnoses and can lead to treatment interruption during migration.[29]

Challenges related to accessing HIV care during the transition stage are major points of concern, specifically in the context of forced displacement. Although our Review focuses on non-acute migration, it is important to highlight that some migrants have to reside in refugee facilities in transition countries for long periods, which might substantially delay their access to HIV care.[14,32,33]

Upon arrival in destination countries, access to HIV care for migrants might be delayed. The reviewed literature distinguishes between challenges in accessing HIV care for migrants with unknown HIV status for whom HIV testing is a crucial initial step when they should be either linked to further HIV treatment or prevention, and migrants who already know their HIV status for whom re-testing and accessing ART is a priority. Engaging different migrant populations in HIV testing programmes can be challenging due to this group's diverse, often traumatising, experiences with health-care systems and multi-faceted experiences related to migration trajectories. For instance, research in the USA[34] reported that some married migrant women with an African background experience delays in HIV testing due to fear of a negative reaction from their spouses and stigma from health-care providers. These findings highlight the need for migrant-sensitive and gender-sensitive HIV testing programmes.

In some countries, HIV testing policies might facilitate migrants' access to HIV care such as for undocumented populations. For example, free-of-charge and anonymous HIV testing with follow-up non-discriminatory linkage to care can be provided, as has been reported by a Swiss study among newly arrived asylum seekers.[35] At the same time, obligatory requirements for HIV testing of migrants can be rooted in discriminatory and stigmatising policies. For instance, despite the Joint United Nations Programme on HIV/AIDS[36] recommendation against obligatory HIV testing of migrants, Canada requires such testing as part of the migration process with migrants reporting not being provided informed consent or pre-test and post-test counselling.[37] Similarly, HIV testing is required in Australia for anyone aged 15 years and older applying for residency, and it can be a reason for rejecting the application.[38]

For migrants with a known positive HIV status, linkage to necessary re-testing and treatment along the migration trajectory is paramount to preventing treatment interruptions for people who had been on ART and to preventing a delay in starting ART when documentation of a positive testing status is not available. However, multiple challenges have been reported that might hinder migrants' access to HIV care in destination countries. Specifically, migrants living with HIV have been reported to experience fear of involuntary disclosure of their HIV status,[6,39,40] fear of stigmatisation from their communities,[6,41] and social isolation related to HIV stigma.[6,40,42] For example, testimonies by migrants[36] and refugees[41] living in Canada highlight their experiences of fear of and stigmatisation from health-care professionals and immigration authorities.These issues become exacerbated in cases with pre-existing discrimination related to migrants' ethnicity, sexual orientation, and place of residence. Acknowledging stigma and discrimination is essential when attempting to unpack barriers to HIV care. According to the 2022 report by the European Centre for Disease Prevention and Control[3] and other research,[43–45] HIV-related stigma is a major barrier to accessing HIV care for all people living with HIV worldwide; however, migrants living with HIV experience a burden of stigma related to the intersection between HIV and migration.[6,46]

Linkage to care for migrants living with HIV is further complicated by the entangled interplay of health system barriers, including migrants' poor familiarity with the health-care system in a destination country,[4,34] legal restrictions, and high treatment costs.[6,47] Many health-care systems are not equipped to respond effectively to migrants' needs due to the absence of migrant-specific policies, no cultural and language facilitators, and no cultural and migrant-sensitive training for health-care providers.[4,19,48,49] Therefore, distrust, fear, and stigmatising practices by health-care professionals towards migrants have been reported in research from countries as different as Canada,[36,41] the USA,[34] Austria,[13] Russia,[50] the Netherlands,[51] and South Africa.[29,52]

Multiple reviewed studies highlighted some facilitators (figure)[4,6,19,35,46,48–50,53–61] that might help to link migrants to HIV care. Depending on who is migrating, when and how, will substantially determine their access to HIV care along the migration trajectory.

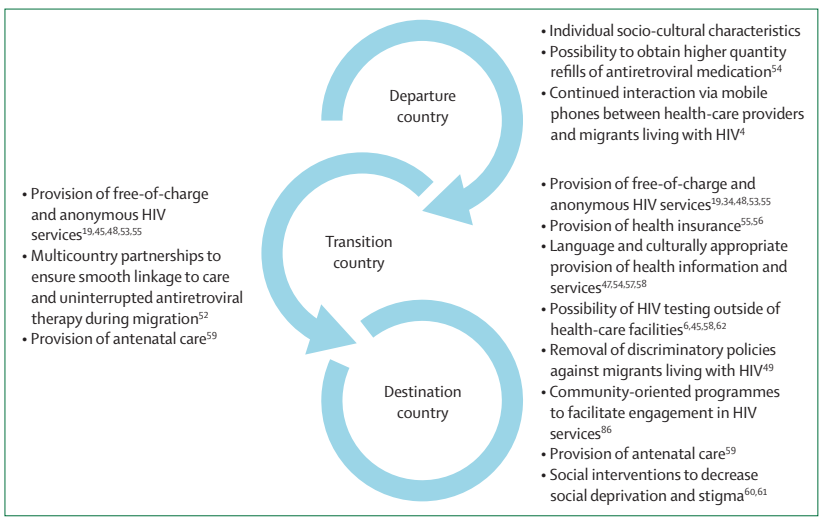

Figure: **Facilitators in accessing HIV care along the migration route**
The figure presents a simplified image of the migration trajectory. We acknowledge that migration pathways can be numerous and complex.

Role of migrants' documentation status in accessing HIV care

Across different countries, undocumented migrants experience substantial barriers when accessing HIV care, with countries either providing HIV testing services without further access to treatment or not allowing any forms of HIV care. For instance, research from South Africa highlighted that undocumented migrants have access to emergency services only[52] and cannot access further treatment.[65] In the USA, undocumented migrants do not have access to health insurance and must pay for their own health care, including HIV care.[42] A review from the EU/EEA showed that only half of EU countries provide free and anonymous HIV testing to undocumented migrants, and 13 (45%) of 29 EU/EEA countries reported no further access to ART for those migrants.[66]

Legal regulations affect individuals' everyday experiences with undocumented migrants globally reporting fear in relation to potential detention and deportation.[6,16,19,34] For instance, in Russia, manual labour migrants are required to present a negative HIV test to obtain an annual work permit.[31,67] However, the fear of possibly positive test results, which might lead to deportation, was reported to force many labour migrants to remain undocumented thus delaying HIV care.[31,67] Two studies from France[63,64] highlighted how social deprivation shaped through discriminatory policies rather than migration in itself is a crucial barrier to undocumented migrants' access to HIV care.

The intersection of labour migration and health-care regulations often forces people into situations in which they cannot access care. Simultaneously, these individuals cannot apply for official employment due to fear that a positive HIV result will lead to deportation. In South Korea, migrant sex workers are required to undergo HIV testing as part of their application for an entertainment visa; however, these individuals are not provided with pre-testing and post-testing counselling, and will be denied a visa, and thus HIV treatment, if they test positive for HIV.[68] Despite international organisations, including the UN High Commissioner for Refugees and the International Labour Organization, requiring proper access to health care for migrants regardless of their HIV status (table), employers in different countries often do not regard this requirement as part of their duty.[53] For instance, temporary migrant farmworkers from Mexico and the Caribbean in Canada have been reported to experience difficulties in mediating their health-care access with their employers as they were not provided with any information regarding the health-care system and health-care coverage. In addition, these people were often not allowed to take time off to visit a health-care institution, including sexual health clinics for HIV testing.[74]

Although some countries provide undocumented migrants with a right to full or partial health care, this right does not always translate to the availability and accessibility of care. Research from the UK,[73] the Netherlands,[76] and South Africa[52] shows that even though all migrants have a right to basic health-care services, such as HIV testing, this right is often not ensured, partly due to insufficient knowledge among health-care providers, including information regarding migrant rights to register with a general practitioner.[77] In addition, intersecting vulnerabilities, such as being undocumented, female, and working in the sex industry might result in heightened barriers and multiple stigmas further reducing access to services.[13,78] For example, undocumented migrant female sex workers from Mexico in the USA belong to the least insured communities and cannot access either HIV care or information regarding HIV prevention.[79]

Although documented migrants have the right to access health care in some countries, they might still face barriers to access HIV care. For example, although Colombia provided a 10-year temporary protection statute for Venezuelan people, including access to health-care services, intersecting structural vulnerabilities including high unemployment, low income, and low food security have been reported to remain crucial barriers for accessing HIV care.[80] In South Africa, documented migrants reportedly faced verbal abuse and discrimination in health-care settings and were denied access to treatment even when they had the right to it, or were charged higher fees.[52]

Interventions to strengthen policy, community, and health systems

To improve the continuity of HIV care for migrants, targeted interventions at the policy, health system, and community levels are necessary. These interventions should reflect the heterogeneity of migrant groups regarding their legal status, sub-populations'

	Migrant categories	Type of document	Health service provision
Prevention			
UN High Commissioner for Refugees[69]	Refugees, asylum seekers, internally displaced people, returnees, and stateless people	Recommendation	Provision of short-term antiretroviral interventions such as post-exposure prophylaxis and prevention of vertical transmission are recommended to be made available for refugees. These interventions are perceived as essential.
Follow-up and treatment			
UN High Commissioner for Refugees[69]	Refugees, asylum seekers, internally displaced people, returnees, and stateless people	Recommendation	For refugees who had been on antiretroviral therapy (ART) in their country of origin before fleeing, every effort should be made to secure prompt continuation of treatment. For refugees who did not receive ART before fleeing, at a minimum, ART should be provided when such treatment is available to resident populations. Whenever possible, the host government should pay the cost of ART for refugees by including them in their national programmes and funding proposals.
Overall care			
International Covenant on Economic, Social and Cultural Rights;[70] UN 1951 Convention Relating to the Status of Refugees[71]	Refugees and asylum seekers	Law	International human rights law and refugee law assert the right of everyone to enjoy the highest attainable standard of physical and mental health without discrimination of any kind. Host country governments are obliged to provide refugees "the same treatment with respect to public relief and assistance as it accorded to their nationals", including the provision of prevention, treatment, and control of diseases and medical services.
European Union Dublin Declaration[72]	Migrants	Recommendation	The Dublin Declaration recognises migrants as an important sub-population that are most vulnerable to an HIV/AIDS infection.
International Labor Organization[73]	Migrant workers	Recommendation	International Labour Organisation's code of practice aims to guarantee a decent workplace and proper health care for workers regardless of their HIV/AIDS status. The code provides guidelines for workplace policies on HIV/AIDS with regard to "(a) prevention of HIV/AIDS; (b) management and mitigation of the effect of HIV/AIDS on the world of work; (c) care and support of workers infected and affected by HIV/AIDS; (d) elimination of stigma and discrimination on the basis of real or perceived HIV status."

Policies referred to in articles identified through the narrative literature review.

Table: **International declarations and policies for the provision of HIV care to migrants**

vulnerabilities, and underlying social determinants. We summarise here interventions reported to be relevant and promising.

On a policy level, universal health coverage regardless of migrants' legal status, with a human rights framework at its core, was highlighted as an essential intervention.[6] Moreover, separation of health from migration policies, including access to all aspects of HIV care as well as prevention, is crucial to avoid fear of detention and deportation.[19,35,81,82]

Health system strengthening interventions were recommended to focus on migrant-aware responses to HIV care.[54,57] Specifically, cross-border co-operation across countries' health systems was suggested to be essential to ensure a smooth transition and necessary re-linkage to HIV care. Highly mobile migrants face challenges accessing treatment due to difficulties in having to identify new sites to access HIV treatment and overcoming administrative processes to collect and refill their medication supplies, positioning them at risk of treatment interruption.[4] To address this issue, cross-border agreements between neighbouring countries should be developed.[53] Additionally, implementation of health passports[57] and centralised HIV databases[4] could allow for continuity in accessing health information for migrants and facilitate their access to ART and re-linkage to care. Such cross-border information exchange is particularly important for individuals who have medical contraindications or need to receive complex second-line or third-line medication.

Several studies made specific recommendations grounded in their findings to improve the continuity of ART access for highly mobile labour migrants living with HIV.[57,83] For example, suggestions were made to engage with employment agencies working with migrants to ensure that migrants were provided with all relevant information regarding the health-care systems in destination countries.[57] A study from South Africa and Namibia provided a good practice example where labour migrants were linked to HIV care through their employer and were able to continuously access ART for a year after leaving the company.[83] This example shows the important role that employers of migrant workers can play in their (re-)linkage to HIV care; however, this approach might be difficult to implement in settings where a positive HIV test can lead to legal challenges. Another intervention to ensure the continuity of ART access for labour migrants was the provision of extended supply of ART the migrants can carry with them from departure to destination countries.[57] This approach is facilitated by the increasing adoption of multi-month dispensing as part of HIV programming. Since 2021, WHO has strongly recommended providing up to 6 months supply of ART for all people who are established on treatment.

To tackle the HIV-related stigma that creates barriers to HIV testing, several studies investigated the possibility of integrating HIV testing with other health system services—an approach that applies to migrants and non-migrants alike. For instance, research from the USA with African and Caribbean migrants showed higher

HIV-testing rates when the testing was offered in a bundle with other tests, such as for hypertension and diabetes.[82] Integration of HIV testing with cervical cancer screening and other contraceptive counselling programmes has been suggested in Sweden to improve access to HIV testing among migrant women.[85] Migrant women in Canada preferred combining HIV testing with antenatal screening as it was perceived as a non-targeted strategy.[72] Furthermore, a combination of HIV testing with antenatal screening was proven successful in Europe in increasing HIV testing and diagnosing migrant women at earlier stages.[18] Opt-out HIV testing in general practices, emergency rooms, and (migration) detention centres was shown to be a promising intervention to increase the accessibility and acceptability of testing.[75,86,87] In this context, it is crucial that HIV testing is voluntary and inclusive to avoid stigmatisation and targeting of migrants as a risk group. However, these interventions might be insufficient to ensure access to testing and follow-up care for some groups of migrants, such as undocumented migrants in countries where they have no access to health-care systems.[79]

For migrants who have access to the health-care system, health-care facilities with multilingual and multicultural staff, including reception staff, trained in migrants' rights and culturally competent communication, played a crucial role in retaining migrants in HIV care.[60] Research from Australia showed that a cultural competency framework can be used in the training of health-care professionals to improve their trust-building capacity with migrants from diverse backgrounds and establish partnerships with most affected migrant communities.[48] In this context, cultural and peer mediators were suggested as important facilitators to improve communication and trust-building between health-care staff and migrants.[87,88] In Israel, trained HIV treatment adherence counsellors from Ethiopia were successfully employed as cultural mediators to assist Ethiopian migrants.[89] Similar interventions were positively reported from Switzerland for sub-Saharan African migrants.[90]

To further improve communication between health-care professionals and migrants, as well as to ensure the continuity of HIV care for highly mobile migrants such as circular labour migrants, mobile health (mHealth) interventions have been suggested as an effective and efficient tool.[4,91] The use of mHealth can vary from text messaging to improve ART adherence[4] to health promotion and information messaging regarding HIV and options for HIV care.[91]

Apart from developing health systems interventions, community strengthening plays an important role in facilitating access to HIV care.[39,92,93] In this context, community strengthening refers to both community engagement strategies to develop and deliver best-suited HIV interventions for migrants, and community outreach programmes to disseminate those strategies for improving access to HIV care.

Community engagement interventions include the development of participatory programmes to work with diverse migrant groups to co-create appropriate interventions. For instance, participatory methodologies were used to co-create a social marketing campaign promoting HIV testing and prevention that would attune to specific migrant groups, such as foreign-born Latinos in the USA, with a particular focus on men who have sex with men.[94–96] Although this campaign did not show statistically significant associations with uptake of HIV testing, it did present researchers with an opportunity to link migrant populations with high incidence of HIV with prevention services.[94] Another participatory-based marketing campaign from the USA aimed to engage with young Latino men who have sex with men who do not identify as gay and resulted in the co-creation of a fictional cartoon peer model promoting HIV testing and safe-sex practices in a culturally sensitive manner.[97] This campaign was reported to improve safe-sex practices.

Different forms of community outreach strategies were reported as being promising. For instance, the use of mobile HIV-testing units outside of the health-care system in places including barber shops, social clubs, street corners, saunas, and gay pride events has been shown to be a helpful approach across different countries to engage with men who have sex with men migrants.[77] Research from France with sub-Saharan African migrants showed that the mobile units working in community settings can help reach different migrants who might not seek HIV testing themselves, including heterosexual men and unemployed people, as well as migrants who have been in the country for no more than 5 years.[61] Apart from utilising mobile units, the inclusion of HIV care within the already existing locally based health centres, such as local clinics with which people have pre-established and trustful relations, was reported a promising strategy in the USA.[60] The panel summarises outreach experiences regarding interventions for improving the continuity of HIV care for migrants as described by professionals from different parts of the world.

Discussion

Although migrants are considered a population vulnerable to HIV acquisition, they experience major intersecting barriers to accessing HIV care along the entire migration trajectory in departure, transition, and destination countries. Migrants' previous compounded experiences with different health-care systems and HIV care, as well as stigmatising experiences related to their social and migration status, ethnicity, and gender might determine their access to and practices around HIV care during and after migration. Furthermore, these practices are largely shaped through restrictive policies and health system infrastructures that delineate who can have access to HIV care and the scope of this care (eg, access to HIV testing only).

Our Review shows the differences in accessing HIV care that people with documented and undocumented migration status face. Despite the UN[68] and United Nations High Commissioner for Refugees[67] calling for non-discriminatory access to the whole continuum of HIV care for migrants, undocumented migrants still do not have access to HIV care in some countries. Migrants' intersecting vulnerabilities at the individual level become entangled with policies around both health care and migration in destination countries. The studies we reviewed clearly show how such intersections might result in forcing some migrants to remain undocumented—for instance, when HIV-negative testing is required for visa purposes, specifically for labour visas. This approach also reduces migrants' individual agency and health-seeking behaviour due to fear of stigma and potential deportation.

To improve equitable access to the continuity of HIV care for migrants, intersectoral interventions at the policy, health systems, and community levels are required. Providing universal health coverage regardless of migration status is essential if countries are to abide by international recommendations and reach the Sustainable Development Goals. Although it is important

Panel: Experiences from the field

These are short summaries of how HIV care for migrant communities is organised in different parts of the world as conveyed by professionals directly involved in the provision of HIV care.

Case 1: experience from Poland

Since 2014, increasing migration of Ukrainian citizens to Poland has been observed, usually for labour and economic status purposes. More than 1 million people immigrated to Poland in this period. This immigration has affected the epidemiology of HIV in the country resulting in a change in the molecular patterns of HIV with a notable rise in the A6 variant (typical for Ukraine).[98] Ukrainian refugees living with HIV have full and unrestricted access to all health-care services in Poland including antiretroviral therapy (ART), and treatment for sexually trasmitted infections (STI), hepatitis C (HCV), and hepatitis B (HCB). Furthermore, system-funded access to all medical services is provided including free-of-charge antiretroviral medications purchased centrally and distributed free-of-charge to all people living with HIV, with 3-monthly stocks provided to all migrating patients from Ukraine. When needed, optimisation of ART in line with antiretroviral availability in Poland and the EU is also performed. Targeted information campaigns in Ukrainian have enabled migrants to identify centres providing HIV care.[99] Clinical follow-up including relevant laboratory diagnostics, treatment of comorbidities, and often psychological support are coordinated by HIV treatment centres, with current virological suppression rates exceeding 90% (for a viral load threshold of 50 copies per mL). Even though there is usually no formal translator available in the HIV medical centres, most centres employ Ukrainian-speaking personnel who provide language support if needed. Currently 69·7% of new diagnoses in this population are classified as late, including 40% presenting with AIDS-defining conditions.[100] Therefore, implementation of targeted testing preferably based on home tests is needed. Lastly, only 25% of people living with HIV exhibit protective levels of hepatitis B surface antibodies, hence the need to provide migrant targeted free HBV vaccination, which is still not in place in Poland.

Case 2: experience from China

China's international migrant population seeking better economic opportunities and affordable education increased from 593 832 in 2010 to 845 697 in 2020, creating additional public health challenges.[101] Migrants in China are unlikely to utilise facility-based health-care services, including HIV testing, due to language, cost, and fear of HIV-related stigma barriers.[102–105] To alleviate testing barriers and expand testing programmes, the Chinese Government officially encouraged the scale-up of HIV self-testing (HIVST) as part of the thirteenth 5-year plan to help decentralise HIV testing services.[167] Consequently, more Chinese cities have adopted HIVST, which offers confidential and anonymous testing and is deemed convenient by many groups of people to make HIV testing more accessible to migrant populations.[107–109] A cross-sectional study showed that 61·8% of international migrants in China had never heard of STI/HIV, reinforcing the governments' recognised need for improved education as part of HIV interventions.[102,110] Guangdong Provincial Dermatology Hospital has worked with informal leaders of migrant communities in Guangzhou to conduct a needs assessment among international migrants residing in the region. This resulted in relevant health education materials promoting health services utilisation and STI/HIV prevention, which the community leaders then disseminated.[103,104] Furthermore, China's rapidly growing e-commerce has been important in decentralising and promoting HIVST uptake among international migrants by harnessing the widespread use of smartphones and digital health.[111] E-commerce platforms in China (eg, Taobao) offer HIVST kits at US$ 1·6–5·0 per kit with free 24–48-h home delivery and online assistance during or after testing.[112] Moreover, built-in multilingual translation functions in China-manufactured telephones and apps further ease the use of e-commerce by migrants. Decentralising HIV services, improving community engagement, and leveraging digital health have been pillars in China's response to the need for improved access to HIV testing services among its international migrants.

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Case 3: experience from Dominican Republic

In 2019, PEPFAR together with the National Response started the index programme in Enhanced Peer Outreach Approach (EPOA), which focuses on reaching, testing, and treating Haitian migrants designated as a priority population in Dominican Republic. The costs of HIV care are fully covered by the government, regardless of immigration status. EPOA is a voucher-based system in which people who are HIV-positive give vouchers to their sexual partners. These vouchers invite the recipients to the health centre for a check-up, without mentioning HIV testing. EPOA has three modalities. The counsellor or another health-care provider calls or visits the partner(s) of the index patient (and recommends that they be tested for HIV). The counsellor will say that the contact is initiated due to random selection from a Ministry of Health programme; the index case and the counsellor cooperate to refer couples to health facilities. They agree on a timeframe within which the index patient (eg, within 7 days) will invite couples. If the index patient does not invite them within the agreed time, the counsellor will contact the couples. However, if at any time the index patient indicates that they do not want to be contacted, especially in potential cases where violence might occur, the counsellor must maintain the confidentiality, safety, and security of the index patient. The index patient directly encourages their biological partner(s) and children to come to the centre for testing or to meet with a counsellor in the community for screening. From 2020, the EPOA among HIV-positive Haitian migrants has resulted in a 2·2-times increase in new HIV-positive migrants receiving treatment, a 4·8-times increase in active HIV-positive migrants receiving treatment, a 5-times increase of HIV-positive migrants who have had at least one viral load test, and a 5·6-times increase in migrants on treatment with viral suppression.

Search strategy and selection criteria

This is a narrative review based on a systematic search and a review of the literature using a thematic approach. The search strategy included the core concepts of HIV, migrants, phases of the HIV care continuum, and access to care. The search period in PubMed was Jan 1, 1989, until Aug 18, 2023. The period for when the included papers were published was not identified to capture all the available literature, with the oldest record retrieved from 1989. The following search terms were used: ("HIV"[MeSH] or "human immunodeficiency virus" or "HIV" or "AIDS"), and ("transient*" or "migrant*" or "refugee*" or "asylum seeker*" or "immigrant*" or "foreigner*" or "third-country national*" or "overseas born"), and ("HIV Testing"[MeSH] OR "HIV Infections/prevention and control"[MeSH] or "continuum" or "link*" or "testing" or "diagnos*" or "retention" or "viral suppression" or "art"), and ("access" or "accessibility" or "Health Services Accessibility"[MeSH]). Articles were included when they had a full-text available in the English language, were a peer-reviewed primary or secondary research article, and discussed at least one phase of the HIV care continuum for migrants regardless of the geographical region. Articles were excluded if they were commentaries, opinion pieces, and preprints; if the papers exclusively discussed internal migration and if they exclusively focused on emergency or acute migration. Through this search strategy, we identified 558 records and after abstract screening 214 records were eligible for full-text screening and 134 articles were included in this review. Grey literature, including reports from international health organisations such as ECDC, WHO, ILO, UNAIDS, and UNHCR were added to fill emerging gaps in the literature. Four additional non-migrant-specific peer-reviewed papers were added to contextualise some of the results findings, including papers on HIV-related stigma and opt-out HIV testing.

to acknowledge that provision of care for migrant communities can be economically challenging for countries hosting a high number of migrants, it is important to highlight the need for inclusive health in all policies that stretch beyond the health-care sector and across borders to ensure the continuity of HIV care. Offering voluntary HIV testing outside of health-care settings or together with non-HIV-related screenings might help to reach different migrant communities and decrease HIV-related stigma. Development of cross-border co-operation between departure and destination countries to ensure uninterrupted access to HIV health information for migrants and access to ART is another important aspect of continuity of care. To tackle stigma related to HIV and migration, specifically within health-care settings, implementation of migrant-sensitive and culturally competent training for health professionals as well as organisation of peer support programmes are promising interventions, which can be supported with mHealth interventions. However, for these different interventions to be successful, community engagement and outreach programmes are crucial. Use of participatory methodologies rooted in co-creation might help develop community-sensitive outreach programmes for both HIV prevention and testing as well as addressing complexities of community level stigma around HIV. This approach requires recognising communities and their expertise as equal partners in research and implementation, and it requires adequate resourcing.

Several potential research gaps have been identified. First, more granular and disaggregated data pertaining to the challenges faced by and needs of migrant populations are needed. Intersectionality and gender-based analyses are required to map and address the challenges of highly heterogeneous migrant communities with particular attention to people who belong to more than one key population, such as belonging to both sexual and ethnic minority groups. Second, further research is needed into the different aspects of accessing HIV care, including re-testing and re-linkage to HIV care along the migration trajectory. Most of the research included in this review focused on HIV testing and linkage to care with little elaboration on the needs and challenges of migrants who need to re-enter care. Third, further research is needed on continuous access to HIV care for migrants in low-income and middle-income countries. Fourth, more insights are needed into lived experiences of migrants living with HIV and their access to HIV care across borders to truly understand how multiple forms of inequality shape HIV risk and access to care. More research with participatory approaches, including evidence on co-created interventions, for working with migrant communities to develop HIV care engagement and outreach programmes is important. Finally, reflecting on the important role of labour migration, intersectoral research across health care, migration, and economy is needed to further understand and assess the relations between the increasing need for labour migration in many countries, those countries' economic growth, and migrants' health care and human rights.

In conclusion, improving access to the continuity of HIV care for migrants requires a shift towards intersectional interventions addressing the underlying multiple and mutually reinforcing inequalities. This will not only improve migrants' individual health but help reduce the global HIV epidemic and ensure we reach the Sustainable Development Goal of ending AIDS by 2030.

Contributors

AK and CMMP developed a study design, did the literature search, data analysis, and interpretation, wrote the first version of the text, and edited the final version. TN and SH developed the study design, interpreted the data, and wrote and edited the final text. CN, BR, NF, GR, FB, CJPAH, FS, ND, AM, L-GB, JBT, and DO contributed to data interpretation and writing and editing the final text. MP, WT, GM, and MCTP contributed to data interpretation, writing and editing the final text, and writing individual case studies for the manuscript.

Declaration of interests

We declare no competing interests. The views and opinions expressed herein are the authors' own and do not necessarily state or reflect those of ECDC. ECDC is not responsible for the data and information collation and analysis and cannot be held liable for conclusions or opinions drawn.

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