


KEY POPULATIONS BRIEF



PEOPLE WHO USE DRUGS



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lobally, people who use drugs¹ (PWUD) remain stigmatized and criminalized, which contributes to devastating health disparities, including extremely high rates of TB often combined with HIV and viral hepatitis. The range of these health issues and the prevailing lack of integrated health services capable of delivering TB, HIV, and harm reduction services in one place largely contribute to the scope of the TB crisis in communities of PWUD. While the impacts of the TB epidemic are most acutely felt in PWUD communities in Eastern Europe and Central Asia, evidence is emerging from South and South-East Asia and sub-Saharan Africa that suggests that these issues are now universal. In countries where HIV epidemics are concentrated among PWUD and where rates of TB and multidrug-resistant TB (MDR-TB) are high, programme implementers and governments need to take immediate action, working alongside global and regional networks of PWUD and local PWUD activists to devise solutions that forgo punitive approaches to drug use and instead deliver effective and efficient results. Governments in other locales where TB epidemics among PWUD may be just beginning need to implement the necessary measures to engage communities of PWUD in all aspects of intervention planning, service delivery and impact evaluation. This guide outlines the key issues with access to TB prevention, treatment and care for PWUD, and provides recommendations for action and advocacy for communities, governments and donors.

¹ Although the impacts of TB are best documented among people who inject drugs, because of the widespread criminalization and discrimination experienced by people who use drugs as a group, this guide is also relevant for those who are non-injectors.

Global Plan to End TB and key populations

The Global Plan to End TB outlines the following 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 different countries to achieve the 90–(90)–90 targets. 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.

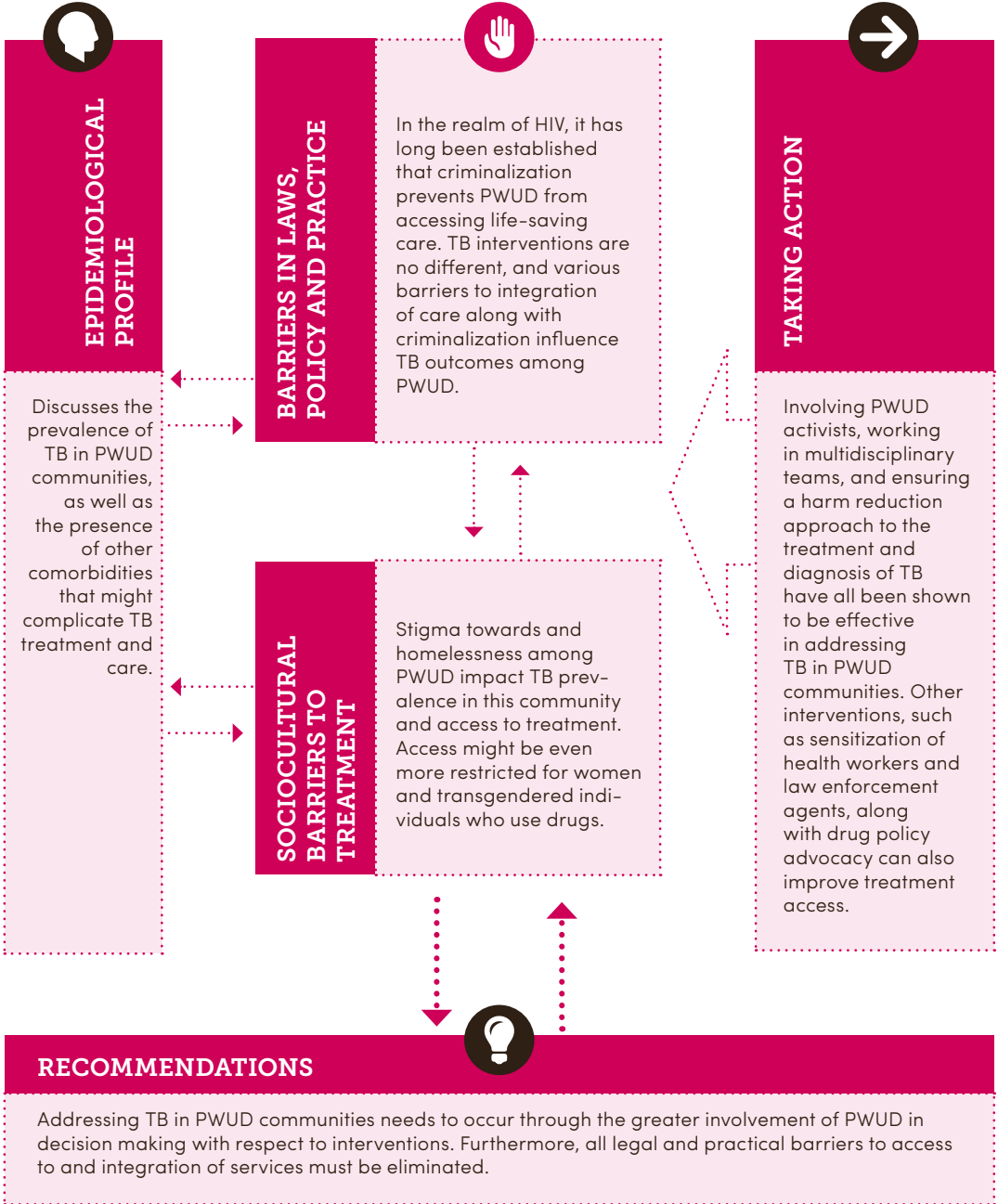
- Identify their key populations at national and subnational levels according to estimates of the risks faced, population size, particular barriers to accessing TB care and gender-related challenges;

Set an operational target of reaching at least 90% of people in key populations through improved access to services, systematic screening where required and new case-finding methods, and providing all people in need with effective and affordable treatment. For PWUD living with HIV, the provision of isoniazid preventive therapy (IPT) is the single most effective method for TB prevention (1,2). WHO recommends that people living with HIV (PLHIV) should receive at least six months of IPT as a part of their HIV care. Despite this long-standing recommendation, fewer than 25% of PLHIV who are in care receive this treatment (1);

- Report on progress with respect to TB using data that are disaggregated by key population, without subjecting the population in question to additional scrutiny, and apply evidence and rights-based interventions that are also gender equitable;
- Ensure the active participation of key populations in the design, delivery and evaluation of services and the provision of TB care in safe environments.

This Guide utilizes the above recommendations to outline risks, discuss strategies for improved access, and highlight opportunities for the involvement of PWUD in all stages of programme development, service delivery and evaluation.

What's in this guide?





Epidemiological profile



Irrespective of their HIV status, PWUD tend to have higher rates of TB and higher prevalence of latent TB infection (LTBI) (3–5). HIV increases the likelihood of TB in communities of PWUD, with HIV-positive people who inject drugs (PWID) two to six times more likely to develop TB disease than HIV-positive non-users (3,6,7). Inability to access TB treatment in a timely manner, combined with the heightened prevalence of LTBI in communities of PWUD, may contribute to the high frequency and severity of TB and MDR-TB outbreaks in this population (3). Risky drug-use practices (such as inhaling crack, cocaine and other inhalants, and exhaling directly into another person's mouth) and/or environmental circumstances (such as cramped, poorly ventilated injection spaces) can also contribute to TB outbreaks (3).

In 2013, 27 million people globally used drugs, and 12.2 million of them were injectors (8). The highest number of people who inject drugs is found in Eastern and South-Eastern Europe (8). Criminalization of drug use and the resultant challenges in accessing sterile injecting equipment lead to PWID sharing needles and syringes, putting them at higher risk of HIV and in turn increasing their vulnerability to TB. Criminalization also makes all PWUD vulnerable to TB through experiences with prison and custodial settings, where the risk of TB is said to be 23 times higher than in the general population (9). PWUD are also susceptible to Hepatitis C and B (10). This combination of health disparities and multiple legal, logistical, and health system barriers to treatment, perpetuated by the

widespread criminalization and stigmatization of PWUD, make it difficult to address TB among PWUD. Among people with TB who also use drugs, at least one in three will have HIV, and two in three will have Hepatitis C (HCV) antibodies, making service integration and coordination crucial for treatment success (11,12). The impacts of the combined epidemics of HIV and TB on communities of PWUD are especially notable in Eastern Europe and Central Asia. In these regions, opiate substitution treatment (OST) – a WHO/UNODC/UNAIDS-recommended intervention for support and adherence to HIV and/or TB treatment – is still not widely available; in addition, cases of HIV among PWUD continue to rise, and rates of MDR-TB are among the highest in the world (13). Evidence is emerging that similar issues might be affecting PWUD in other regions (14,15).



Barriers in laws, policy and practice

Criminalization and disregard for the fundamental rights of people who use drugs

Environmental factors, specifically restrictive laws and policies, have a profound impact on health-seeking behaviour among vulnerable populations (16,17). When discussing barriers to TB diagnosis and treatment among PWUD, the issue of criminalization should take precedence. Despite recommendations of multiple international bodies (including WHO, UNDP, UNAIDS, UNHCR, and UN Women) calling for a revision of punitive drug policies in order to reverse their negative impact on health, human rights and development (17–23), countries continue to institute harsh punishments for PWUD and prosecute drug possession for personal use. A 2015 UN Office on Drugs and Crime (UNODC) paper proposed the decriminalization of drug possession for personal consumption; however, the proposal was withdrawn by the agency because of UN member country pressure (24), yet again demonstrating the challenges in breaking the status quo of punitive drug policies.

In addition to incarcerating a disproportionate amount of PWUD around the world – thereby subjecting this population to increased risk of HIV, HCV, and TB or MDR-TB, and treatment delays and interruptions – punitive drug policies and criminalization also lead to complete disregard for the human rights of PWUD, widespread harassment and violence by police, and the reinforcement of societal stigma (17,18). Both in police lock-ups and in health settings, criminalization translates into discrimination against PWUD, denial of care and treatment, and other practices that can be characterized as cruel, inhumane and degrading, such as the use of withdrawal during interrogations or while in pre-trial detention (25). These practices are widely tolerated and even supported by governments, health systems and societies at large, since PWUD are often considered lesser human beings (17). However, addressing any health disparity, including highly contagious yet highly manageable TB, is impossible without involving the communities of PWUD and acknowledging their fundamental rights to health, dignity and life. Recognizing that PWUD as individuals and as a group have agency to take charge of their own health, while providing access to the necessary services and support, is the only way forward for curbing TB in this population.

Restrictions on and lack or denial of integrated treatment delivery

Research and practice have shed light on the numerous challenges to the successful diagnosis and treatment of TB in PWUD. Specifically, lack of follow-through on medical examinations and referrals (26–29) and insufficient treatment adherence (28,30,31) have frequently been cited as key barriers. However, the root of the problem for both TB diagnosis and treatment for PWUD lies in either the lack of integration between various medical and public health services that should be available to them or the refusal to provide such services.

Since PWUD with TB also frequently present with other conditions, including HIV and HCV, it is essential that health service delivery for PWUD occur in one place (12,32). However, multiple restrictions to the integration of services exist. For example, OST, which is considered the gold standard for treating PWUD with TB and/or living with HIV (12), is largely unavailable in HIV and TB treatment facilities (33,34), as such facilities are restricted from prescribing narcotic substances. Health centres that deliver HIV and TB care might be geographically disconnected and fail to cooperate when tasked with treating patients who require multiple interventions (11,33–36). In addition, approaches to TB treatment that require lengthy hospital stays are still practised in some regions of the world; without access to OST in these hospitals, and subject to poor infection control and insensitive

staff, PWUD are left to their own devices, often abandoning their treatment that is so poorly managed (34,35). Similarly, harm reduction programmes that have the widest reach and are most closely aligned with (and sometimes even run by) communities of PWUD cannot implement TB testing and treatment unless they are affiliated with medical and health facilities. Although some progress has been made in the efforts to integrate HIV, TB, harm reduction, drug treatment and HCV services for PWUD, such interventions have rarely been systematic. Despite WHO producing specific guidelines on the collaborative provision of HIV and TB services for PWUD in 2008 (12), much work remains to be done. This calls for immediate review of the policies and practices that block the access of PWUD to life-saving TB diagnostic and treatment services. In addition, given the available opportunities for treatment in the community and at home, TB treatment that promotes long-term confinement and involuntary detention, which is especially unsuitable for active PWUD, is no longer acceptable (37–39).



Sociocultural barriers to treatment

Stigma and violations in health settings

The stigma against PWUD has been well documented. Research has shown the impact of this stigma on HIV treatment delay and even denial for PWUD (34,40,41). Doctors in resource-limited settings often cite PWUD nonadherence when deciding whether or not to start patients on expensive antiretroviral medications. Late initiation of antiretroviral therapy (ART) leads to excessive risk of TB in PWUD living with HIV. Furthermore, PWUD who are living with HIV and TB and who are trying to start on ART may first be required to undergo TB treatment or detox (34). This requirement creates a cycle of bad health care that ultimately displays tremendous disregard for human life. PWUD who are not living with HIV face similar issues, as medical institutions and health workers have little incentive to ensure PWUD patients' adherence to lengthy TB treatment regimens. Health provider apathy towards PWUD was noted in developed countries in the mid-1990s, when issues of HIV and TB were prevalent among this population (42,43); such attitudes are now commonplace elsewhere (40). The denial or delay of treatment and care to PWUD for both HIV and TB, facilitated by medical institutions, must be stopped immediately, as must the belief among providers that TB and substance use are too difficult to manage together (31). This can be countered by known successful practices for treating TB among PWUD.

Lack of knowledge/confusion of prevention messages

There is some evidence that, despite being aware of their heightened risk for TB (44), understanding that HIV increases their risk of TB (45), and realizing that TB is treatable (45,46), PWUD are less aware of the fact that TB is spread by coughing (44,47) or that people can become resistant to TB medications (44). This lack of full understanding of the risks of TB and the confusion of prevention messages (for example, PWUD in one study thought that TB could be prevented by bleaching their injection equipment or using condoms (47) may lead to delays in seeking care.

Gender

While more men than women get TB, women may encounter further gender-specific barriers that prevent them from accessing treatment and care. Women who use drugs face additional challenges in accessing both PWUD-specific services, such as harm reduction, and general health care. This may be due to the additional layer of stigma and discrimination imposed on them, as well as the lack of consideration for their specific needs when designing services (48,49). In the realm of TB, women have to contend with reduced access to TB diagnosis and treatment. Thus, it is important to develop specific strategies for addressing TB, and potentially TB and HIV coinfection, among women in the communities of PWUD.



Homelessness, poverty, fear of police, and incarceration

High rates of homelessness and/or unstable living and economic conditions (17,50) are common among PWUD. These factors make PWUD more susceptible to TB and vulnerable to police harassment, which may result in incarceration and thus additional risk of TB in prison. Fear of police among PWUD has been associated with HIV risk behaviours and avoidance of health care seeking, since they perceive any interaction with formal health or social service systems to carry the potential of police interaction and arrest (16,51). Law enforcement representatives might target PWUD for various reasons; even in places where the possession of drugs for personal use is not criminalized, the possession of syringes or trespassing and loitering might be grounds for arrest. Such policies and practices pose barriers for PWUD to access health and other services. Consequently, it is imperative to work with members of law enforcement authorities in order to sensitize them to the public health impacts of their actions and make them agents of positive change. Positive results have been achieved when civil society organizations and public health authorities have worked with police on HIV prevention in certain locales (52–55).

Delay in seeking treatment and malnutrition

While stigma along with the range of other factors described above play into the delay in seeking treatment among PWUD, evidence suggests that opiates, serving as cough suppressants, make it difficult for PWUD and OST patients to recognize the symptoms of TB disease (3,15). Individuals who use pharmaceutical grade drugs containing opiates might also be susceptible to this delay in self-diagnosis and treatment-seeking. Inhalant users are also at an increased risk of TB; however, because they face a range of other respiratory conditions, such as bronchitis, asthma and others (56), they might not readily identify the need to address TB. Such delays, of course, can lead to heightened TB transmission rates within communities of PWUD, more severe TB disease and increased mortality (57–59). Thus, education within PWUD communities and extra attention by OST doctors may help to shorten these delays. In addition to delays in treatment seeking, malnutrition that is associated with drug use (60), but not frequently addressed in interventions for PWUD, might serve as a deterrent for both TB treatment adherence and effectiveness. Thus, considerations need to be made to ensure that PWUD receive proper nutrition while undergoing treatment.

Difficulty in adhering to treatment and preventative treatment of LTBI

Because of these multiple challenges to accessing care, PWUD generally have lower rates of adherence to TB treatment than populations who do not use drugs. Treatment of LTBI with IPT through techniques that utilize directly observed and otherwise supported treatment has been shown to be effective among PWUD and in reducing transmission in PWUD communities.



Taking action

Involving PWUD communities

In countries where successful approaches to integrating TB care into HIV prevention and treatment programming for PWUD have been tested, communities of PWUD have been involved in the decision-making process regarding the design, delivery and evaluation of the programming. The following interventions have been successful in utilizing the energy and involvement of PWUD communities in delivering TB care:

- advocacy of take-home doses of OST that can be delivered to PWUD receiving TB treatment at home or in long-term in-patient TB facilities (61);
- patient-supported TB treatment and ART at harm reduction sites and street-based outreach (33);
- PWUD working alongside doctors to collect sputum samples in places where PWUD like to meet (39).

These examples demonstrate that, in order to develop the most effective solutions to TB prevention, diagnosis, treatment delivery and care, and to achieve the desired results, PWUD communities must be involved.

Engaging multidisciplinary teams to provide effective case management

Multidisciplinary teams that include harm reduction workers (usually represented by the PWUD community) and TB, drug treatment, and HIV doctors and social workers are most successful in engaging PWUD in the TB, drug treatment, and HIV care continuum (33). The interventions that constitute effective case management do not have to be excessive or expensive, but require the close collaboration and coordination between all parties involved. In addition, the advent of mHealth could make these interventions less time-consuming, more effective and more easily targeted towards the people who struggle with adherence the most. Case management utilizing mHealth interventions can help PWUD adhere to ART for HIV (62,63). mHealth interventions have also shown positive results in increasing adherence to TB treatment (64). In addition, mHealth interventions can help to save costs. Engagement of peers and peer support and counselling are also crucial for the success of TB treatment outcomes among PWUD. Nevertheless, it is important that peer outreach and counselling workers clearly understand TB prevention modalities so as not to subject themselves to additional risks.



Applying the principles of harm reduction to TB treatment and control

The harm reduction model is client-centric and hinges on the principle of delivering services at the point of need, i.e., meeting PWUD where they are. While some PWUD may be open to the idea of substitution treatment through the period of TB treatment initiation, others may not. While some PWUD will attend peer group meetings and needle exchange programmes where they can also receive daily treatment for TB and/or HIV, others will not for a variety of reasons. Therefore, it is essential to develop interventions that will engage PWUD in a manner that is most effective. Global experience has shown that interventions that engage PWUD through street-based outreach or through community centres are the most effective in facilitating adherence to treatment (39,65–67). Other interventions that have involved providing small financial incentives and nutrition support have also proven successful (68).

Training and sensitization for representatives of law enforcement and health workers

The violence and harassment that PWUD experience when interacting with law enforcement representatives largely drive PWUD to not engage in health seeking (17,69). Sensitizing police to HIV prevention and harm reduction programming has been an effective strategy for involving law enforcement entities in the expansion of access to HIV prevention services (52,54,69). Additional work with police to address the challenges of access to TB services among this group could bring about similarly positive results.





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 for people who use drugs.

Civil Society	PWUD Networks	Governments	Donors
Promote community and PWUD engagement in national, regional and local TB programme planning; advocate for service integration;	Engage with HIV, TB, and drug control and prevention bodies at the local and national level in order to plan the best interventions and strategies to increase the access of PWUD to TB prevention, treatment and care;	Ensure that HIV, TB, and drug control and prevention entities at the local and national level a) work collaboratively with communities of PWUD to design interventions, and b) work jointly on devising and rolling out TB interventions for PWUD;	Fund and promote interventions that require service integration for PWUD, as well as new technologies for diagnosis and treatment, and innovative interventions for service delivery, treatment adherence and completion;
Work with PWUD community activists to expand knowledge about TB among PWUD;	Ensure expanded knowledge of TB transmission and risk among communities of PWUD; seek simple solutions for TB prevention and control in places where PWUD meet (e.g., open windows, proper ventilation, no overcrowding, cover your cough and wash your hands reminders);	Eliminate practical barriers to integrated care for PWUD by expanding access to OST in TB care and working with harm reduction services to integrate TB prevention, diagnosis and treatment into their operation;	Fund collaboration with civil society and PWUD networks and government representatives; distribute information about effective knowledge and awareness campaigns about TB;
Advocate for eliminating any legal barriers denying PWUD access to TB prevention, treatment and care;	Document the impact of TB on communities of PWUD, including legal barriers, denial of care and lack of care integration; advocate for the elimination of legal barriers;	Eliminate legal barriers to integrated care for PWUD; stop prosecuting PWUD for minor offences in order to expand access to health care;	Promote and fund interventions that present practical and legal solutions to eliminating barriers to integrated care; promote cost-effective interventions that bring about the greatest change;
Advocate against stigma and raise awareness on the dangers of the stigmatization and prosecution of PWUD among health workers and law enforcement officials.	Promote health worker education and conduct training at the local and national level in order to advance stigma-free and sensible approaches to effectively engaging PWUD in TB treatment and care;	Respond to recommendations of PWUD communities; address legal barriers to TB treatment and care for PWUD; support the training of health care professionals to work with PWUD;	Fund the engagement of PWUD networks at the global, regional and national level in order to raise awareness about violations in TB health care, and to promote respect for human dignity and life in supported interventions;
	Advocate for the training of law enforcement officials that informs police about the risks of TB among PWUD.	Create policies that facilitate police awareness and collaboration on public health service access for PWUD.	Support programming that involves law enforcement officials in supporting rather than interrupting public health interventions for PWUD.

References

1. The three I's for TB/HIV: isoniazid preventive therapy (IPT). Geneva: World Health Organization (http://www.who.int/hiv/topics/tb/3is_ipt/en/, accessed 18 February 2016).
2. van Halsema CL, Fielding KL, Chihota VN, Russell EC, Lewis JJ, Churchyard GJ, et al. Tuberculosis outcomes and drug susceptibility in individuals exposed to isoniazid preventive therapy in a high HIV prevalence setting. *AIDS*. 2010;24(7):1051–5.
3. Deiss RG, Rodwell TC, Garfein RS. Tuberculosis and drug use: review and update. *Clin Infect Dis*. 2009;48(1) (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3110742/>, accessed 12 October 2015).
4. Markowitz N, Hansen NI, Wilcosky TC, Hopewell PC, Glassroth J, Kvale PA, et al. Tuberculin and anergy testing in HIV-seropositive and HIV-seronegative persons. Pulmonary Complications of HIV Infection Study Group. *Ann Intern Med*. 1993;119(3):185–93.
5. Mathur ML, Chaudhary RC. Increased risk of tuberculosis in opium addicts. *Indian J Med Sci*. 1996;50(10):365–7.
6. Friedland G. Infectious disease comorbidities adversely affecting substance users with HIV: hepatitis C and tuberculosis. *J Acquir Immune Defic Syndr*. 2010;55 Suppl 1:S37–42.
7. Taarnhøj GA, Engsig FN, Ravn P, Johansen IS, Larsen CS, Røge B, et al. Incidence, risk factors and mortality of tuberculosis in Danish HIV patients 1995–2007. *BMC Pulm Med*. 2011;11:26.
8. World drug report 2015: use of drugs. Vienna: United Nations Office on Drugs and Crime; 2015 (http://public.tableau.com/views/WDR2015-Useofdrugs/Preview?:embed=y&:showVizHome=no&:host_url=https%3A%2F%2Fpublic.tableau.com%2F&:tabs=no&:toolbar=yes&:animate_transition=yes&:display_static_image=yes&:display_spinner=yes&:display_overlay=yes&:display_count=yes&:showVizHome=no&:showTabs=y&:loadOrderID=0, accessed 30 October 2015).
9. Baussano I, Williams BG, Nunn P, Beggiato M, Fedeli U, Scano F. Tuberculosis incidence in prisons: a systematic review. *PLoS Med*. 2010;7(12):e1000381.
10. Garfein RS, Vlahov D, Galai N, Doherty MC, Nelson KE. Viral infections in short-term injection drug users: the prevalence of the hepatitis C, hepatitis B, human immunodeficiency, and human T-lymphotropic viruses. *Am J Public Health*. 1996;86(5):655–61.
11. Getahun H, Gunneberg C, Sculier D, Verster A, Raviglione M. Tuberculosis and HIV in people who inject drugs: evidence for action for tuberculosis, HIV, prison and harm reduction services. *Curr Opin HIV AIDS*. 2012;7(4):345–53.
12. Policy guidelines for collaborative TB and HIV services for injecting and other drug users: an integrated approach. Geneva: World Health Organization; 2008 (<http://www.ncbi.nlm.nih.gov/books/NBK321185/>, accessed 15 October 2015).
13. Grenfell P, Baptista Leite R, Garfein R, de Lussigny S, Platt L, Rhodes T. Tuberculosis, injecting drug use and integrated HIV-TB care: a review of the literature. *Drug Alcohol Depend*. 2013;129(3):180–209.
14. Stone KA. Reviewing harm reduction for people who inject drugs in Asia: the necessity for growth. *Harm Reduct J*. 2015;12(1):32.
15. Smart T. TB-HIV news from the 44th Union World Conference on Lung Health. HIV & AIDS Treatment in Practice. 2014;208 (<http://www.aidsmap.com/TB-HIV-news-from-the-44th-Union-World-Conference-on-Lung-Health/page/2831777>, accessed 15 October 2015).
16. Burris S, Blankenship KM, Donoghoe M, Sherman S, Vernick JS, Case P, et al. Addressing the “risk environment” for injection drug users: the mysterious case of the missing cop. *Milbank Q*. 2004;82(1):125–56.
17. Global Commission on HIV and the Law. HIV and the law: risks, rights and health. New York: United Nations Development Programme; 2012 (<http://www.hivlaw-commission.org/resources/report/FinalReport-Risks,Rights&Health-EN.pdf>, accessed 13 October 2015).
18. Taking control: pathways to drug policies that work. Rio de Janeiro: Global Commission on Drug Policy; 2014 (<http://www.gcdpsummary2014.com/>, accessed 16 October 2015).
19. Addressing the development dimensions of drug policy. New York: United Nations Development Programme; 2015 (<http://www.undp.org/content/undp/en/home/library-page/hiv-aids/addressing-the-development-dimensions-of-drug-policy.html>, accessed 17 October 2015).
20. Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations. Geneva: WHO; 2014 (<http://www.who.int/hiv/pub/guidelines/keypopulations/en/>, accessed 13 October 2015).



21. A gender perspective on the impact of drug use, the drug trade, and drug control regimes: UN Women policy brief. UN Task Force on Transnational Organized Crime and Drug Trafficking as Threats to Security and Stability; 2014 (https://www.unodc.org/documents/ungass2016/Contributions/UN/Gender_and_Drugs_-_UN_Women_Policy_Brief.pdf, accessed 18 February 2016).
22. A public health and rights approach to drugs. Geneva: Joint United Nations Programme on HIV/AIDS; 2015 (http://www.unaids.org/en/resources/documents/2015/JC2803_drugs, accessed 18 February 2016).
23. Joint United Nations Programme on HIV/AIDS (UNAIDS). United Nations High Commissioner for Human Rights urges governments to support decriminalisation and harm reduction. International Drug Policy Consortium. 23 October 2015. (<http://idpc.net/alerts/2015/10/united-nations-high-commissioner-for-human-rights-exhorts-governments-to-support-decriminalisation-and-harm-reduction>, accessed 18 February 2016).
24. Easton M. UN attempt to decriminalise drugs foiled. BBC News. 19 October 2015 (<http://www.bbc.com/news/uk-34571609>, accessed 30 October 2015).
25. Méndez JE. Report of the Special Rapporteur on torture and other cruel, inhuman or degrading treatment or punishment. United Nations Human Rights Council; 2013 (<http://www.refworld.org/docid/51136ae62.html>, accessed 17 October 2015).
26. Rusen ID, Yuan L, Millson ME. Prevalence of Mycobacterium tuberculosis infection among injection drug users in Toronto. *Can Med Assoc J*. 1999;160(6):799–802.
27. Brassard P, Bruneau J, Schwartzman K, Sénécal M, Menzies D. Yield of tuberculin screening among injection drug users. *Int J Tuberc Lung Dis*. 2004;8(8):988–93.
28. Pilote L, Tulsy JP, Zolopa AR, Hahn JA, Schechter GF, Moss AR. Tuberculosis prophylaxis in the homeless: a trial to improve adherence to referral. *Arch Intern Med*. 1996;156(2):161–5.
29. Story A, Murad S, Roberts W, Verheyen M, Hayward AC, London Tuberculosis Nurses Network. Tuberculosis in London: the importance of homelessness, problem drug use and prison. *Thorax*. 2007;62(8):667–71.
30. Pablos-Méndez A, Knirsch CA, Barr RG, Lerner BH, Frieden TR. Nonadherence in tuberculosis treatment: predictors and consequences in New York City. *Am J Med*. 1997;102(2):164–70.
31. Gelmanova IY, Keshavjee S, Golubchikova VT, Berezina VI, Strelis AK, Yanova GV, et al. Barriers to successful tuberculosis treatment in Tomsk, Russian Federation: non-adherence, default and the acquisition of multidrug resistance. *Bull World Health Organ*. 2007;85(9):649–732 (<http://www.who.int/bulletin/volumes/85/9/06-038331/en/>, accessed 15 October 2015).
32. Centers for Disease Control and Prevention (CDC). Integrated prevention services for HIV infection, viral hepatitis, sexually transmitted diseases, and tuberculosis for persons who use drugs illicitly: summary guidance from CDC and the U.S. Department of Health and Human Services. *MMWR Recomm Rep*. 2012;61(RR-5):1–40.
33. Smart T. Collaborative TB and HIV services for drug users. *HIV & AIDS Treatment in Practice*. 2010;159 (<http://www.aidsmap.com/Collaborative-TB-and-HIV-services-for-drug-users/page/1411949>, accessed 17 October 2015).
34. Wolfe D, Carrieri MP, Shepard D. Treatment and care for injecting drug users with HIV infection: a review of barriers and ways forward. *Lancet*. 2010;376(9738):355–66.
35. Delivery of effective tuberculosis treatment to drug dependent HIV-positive patients. Andrey Rylkov Foundation for Health and Social Justice; 2011 (<http://en.rylkov-fond.org/blog/tbr/effective-tb-treatment/>, accessed 17 October 2015).
36. Drug use and tuberculosis. Eurasian Harm Reduction Network (EHRN) (<http://www.harm-reduction.org/issues/drug-use-and-tuberculosis>, accessed 17 October 2015).
37. WHO Guidance on human rights and involuntary detention for xdr-tb control. Geneva: World Health Organization; 2007 (http://www.who.int/tb/features_archive/involuntary_treatment/en/, accessed 18 February 2016).
38. Todrys KW, Howe E, Amon JJ. Failing Siracusa: governments' obligations to find the least restrictive options for tuberculosis control. *Public Health Action*. 2013;3(1):7–10.
39. Keshavjee S, Yedilbayev A, Sweeney C. The Sputnik initiative: patient-centered accompaniment for tuberculosis in Russia. Boston: Partners in Health; 2014 (<http://www.pih.org/library/the-sputnik-initiative-patient-centered-accompaniment-for-tuberculosis-in-r>, accessed 30 October 2015).
40. Beyrer C, Kazatchkine M. HIV response "at turning point". BBC News. 29 November 2013 (<http://www.bbc.com/news/health-25118975>, accessed 17 October 2015).

41. Rhetoric and risk. New York: Human Rights Watch; 2006 (<https://www.hrw.org/report/2006/03/01/rhetoric-and-risk/human-rights-abuses-impeding-ukraines-fight-against-hiv/aids>, accessed 17 October 2015).
42. Curtis R, Friedman SR, Neaigus A, Jose B, Goldstein M, Des Jarlais DC. Implications of directly observed therapy in tuberculosis control measures among IDUs. *Public Health Rep.* 1994;109(3):319–27.
43. Edlin BR, Kresina TF, Raymond DB, Carden MR, Gourevitch MN, Rich JD, et al. Overcoming barriers to prevention, care, and treatment of hepatitis C in illicit drug users. *Clin Infect Dis.* 2005;40(Suppl 5):S276–85.
44. Nyamathi A, Sands H, Pattatucci-Aragón A, Berg J, Leake B. Tuberculosis knowledge, perceived risk and risk behaviors among homeless adults: effect of ethnicity and injection drug use. *J Community Health.* 2004;29(6):483–97.
45. Wolfe H, Marmor M, Maslansky R, Nichols S, Simberkoff M, Des Jarlais D, et al. Tuberculosis knowledge among New York City injection drug users. *Am J Public Health.* 1995;85(7):985–8.
46. Salomon N, Perlman DC, Friedmann P, Perkins MP, Ziluck V, Jarlais DC, et al. Knowledge of tuberculosis among drug users: relationship to return rates for tuberculosis screening at a syringe exchange. *J Subst Abuse Treat.* 1999;16(3):229–35.
47. Durante AJ, Selwyn PA, O'Connor PG. Risk factors for and knowledge of *Mycobacterium tuberculosis* infection among drug users in substance abuse treatment. *Addiction.* 1998;93(9):1393–401.
48. Women who inject drugs and HIV: Addressing specific needs. Vienna: United Nations Office on Drugs and Crime; 2014.
49. Pinkham S, Malinowska-Sempruch K. Women, harm reduction, and HIV. New York: International Harm Reduction Development Program of the Open Society Institute; 2007 (<http://www.opensocietyfoundations.org/publications/women-harm-reduction-and-hiv-0>, accessed 30 October 2015).
50. Topp L, Iversen J, Baldry E, Maher L, Collaboration of Australian NSPs. Housing instability among people who inject drugs: results from the Australian needle and syringe program survey. *J Urban Health Bull N Y Acad Med.* 2013;90(4):699–716.
51. Maher L, Dixon D. Policing and public health: Law enforcement and harm minimization in a street-level drug market. *Br J Criminol.* 1999;39(4):488–512.
52. Beletsky L, Agrawal A, Moreau B, Kumar P, Weiss-Laxer N, Heimer R. Police training to align law enforcement and HIV prevention: preliminary evidence from the field. *Am J Public Health.* 2011;101(11):2012–5.
53. Patil S. What do police have to do with HIV prevention? Open Society Voices. 18 July 2014 (<http://www.opensocietyfoundations.org/voices/how-police-can-arrest-spread-hiv>, accessed 15 November 2015).
54. Beletsky L, Thomas R, Shumskaya N, Artamonova I, Smelyanskaya M. Police education as a component of national HIV response: lessons from Kyrgyzstan. *Drug Alcohol Depend.* 2013;132:S48–52.
55. Beletsky L, Cochrane J, Sawyer AL, Serio-Chapman C, Smelyanskaya M, Han J, et al. Police encounters among needle exchange clients in Baltimore: drug law enforcement as a structural determinant of health. *Am J Public Health.* 2015;105(9):1872–9.
56. Howard MO, Bowen SE, Garland EL, Perron BE, Vaughn MG. Inhalant use and inhalant use disorders in the United States. *Addict Sci Clin Pract.* 2011;6(1):18–31.
57. Tuberculosis fact sheet. Geneva: World Health Organization; 2015 (<http://www.who.int/mediacentre/factsheets/fs104/en/>, accessed 15 October 2015).
58. Golub JE, Bur S, Cronin WA, Gange S, Baruch N, Comstock GW, et al. Delayed tuberculosis diagnosis and tuberculosis transmission. *Int J Tuberc Lung Dis.* 2006;10(1):24–30.
59. Virenfeldt J, Rudolf F, Camara C, Furtado A, Gomes V, Aaby P, et al. Treatment delay affects clinical severity of tuberculosis: a longitudinal cohort study. *BMJ Open.* 2014;4(6):e004818.
60. Ross LJ, Wilson M, Banks M, Rezannah F, Daglish M. Prevalence of malnutrition and nutritional risk factors in patients undergoing alcohol and drug treatment. *Nutrition.* 2012;28(7–8):738–43.
61. Maria Golovanevskaya LV. In control?: Ukrainian opiate substitution treatment patients strive for a voice in their treatment. *Subst Use Amp Misuse.* 2012;47(5):511–21.
62. Ingersoll K, Dillingham R, Reynolds G, Hettema J, Freeman J, Hosseinbor S, et al. Development of a personalized bidirectional text messaging tool for HIV adherence assessment and intervention among substance abusers. *J Subst Abuse Treat.* 2014;46(1) (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3818515/>, accessed 23 November 2015).

63. Montoya JL, Georges S, Poquette A, Depp CA, Atkinson JH, Moore DJ, et al. Refining a personalized mHealth intervention to promote medication adherence among HIV+ methamphetamine users. *AIDS Care*. 2014;26(12):1477–81.
64. Bakshi A, Li J, Ray P, Narasimhan P, Bakshi K. Delivery of multilingual mHealth service for control of TB/HIV in developing countries. In: 2012 45th Hawaii International Conference on System Science (HICSS); 2012:925–31.
65. IHRC Regional Track: Workshop on integrated harm reduction services for PUD. Eurasian Harm Reduction Network (EHRN); 2013 (<http://www.harm-reduction.org/blog/regional-workshop-tb>, accessed 30 October 2015).
66. The new profile of drug-resistant tuberculosis in Russia: a global and local perspective: summary of a joint workshop. Washington, DC: National Academies Press; 2011 (<http://www.nap.edu/catalog/13033>, accessed 30 October 2015).
67. USAID dialogue on HIV and Tuberculosis Project. Washington, DC: United States Agency for International Development; 2014 (<https://www.usaid.gov/kyrgyz-republic/fact-sheets/usaid-dialogue-hiv-and-tuberculosis-project>, accessed 30 October 2015).
68. Dhingra VK, Lall D, Aggarwal N, Vashist RP. DOTS in drug addicts with TB: Delhi experience. *Indian J Tuberc*. 2008;55(3):122–6.
69. Strathdee S, Beletsky L. HIV, drugs and the legal environment. In: UNODC Scientific Event / Science Addressing Drugs And Health: State of the Art, 11 March 2014, Vienna, Austria (https://www.unodc.org/documents/hiv-aids/CND2014/UNODC_SCIENTIFIC_EVENT_legal_env_STRATHDEE.pdf).

Acknowledgements

The Stop TB Partnership acknowledges with gratitude everyone's contribution. We thank each of them for their enthusiastic feedback and support and we hope to implement this together.

Main Writers Marina Smelyanskaya and John Duncan of The Focus Group Consulting

Stop TB Partnership Colleen Daniels Jacob Creswell
Caoimhe Smyth James Ayre
Farihah Malik Lucica Ditiu

**Contributors -
Participants of the TB Key
Populations Workshop
November 2015** Ailed Bencomo Alerm Maggy Gama
Alberto Colorado Manita Pandey
Arnold Mafukidze Marciel Buen
Ashvini Vyas Marina Smelyanskaya
Austin Obiefuna Melecio Mayta Ccota
Bishwa Rai Mo Barry
Blessi Kumar Moises Uamusse
Brianna Harrison Nduru Gichamba
Chu Thái Sơn Nonna Turusbekova
Cristina Brigaste Patricia Odolo
Dean Lewis Paul Moses Ndegwa Mutiga
Deepti Chavan Pilar Ustero
Duncan Moeketse Prabha Mahesh Shankar
Elchin Mukhtarli Ramya Ananthakrishnan
Endalkachew Fekaduer Rhonda Marama
Eva Limachi Safar Naimov
Harry Hausler Samuel Boy Kunene
Herve Isambert Sophie Dilmitis
Imran Zafar Stacie Stender
James Malar Steph Topp
John Duncan Steven John
Karabo Rafube Thato Mosidi
Kate Thomson Timur Abdullaev
Kevork Kara –Agopian Valeriu Istrati
Kibibi Mbwavi Vū Manh Trí
Liesl PageShipp Yana Morenets
Lisa Leenhouts–Martin Yuki Takemoto
Loyce Maturu

**Layout
Cover** Miguel Bernal
Nina Saouter

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The Stop TB Partnership
acknowledges with gratitude the financial
and technical support received from
the Global Fund to Fight AIDS, TB & Malaria.

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Chemin de Blandonnet 2,
1241 Vernier
Geneva, Switzerland
www.stoptb.org