

Research paper

Drug scene, drug use and drug-related health consequences and responses in Kulob and Khorog, Tajikistan

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ABSTRACT

Background: Tajikistan and other Central Asian republics are facing intertwined epidemics of injecting drug use and HIV. This paper aims to examine drug scene, drug use, drug-related infectious diseases, drug treatment and other responses to health consequences of drug injecting in two Tajik cities of Kulob (Khatlon Region) and Khorog (Gorno-Badakhshan Autonomous Oblast).

Methods: We conducted 12 focus group discussions in Kulob and Khorog and analysed peer-reviewed literature, published and unpublished programme and country reports and other publications that focused on substance use and/or HIV/AIDS in Tajikistan and included the Khatlon and Gorno-Badakhshan regions. **Results:** In both Kulob and Khorog, heroin is used by the overwhelming majority of people who inject drugs (PWID), with one dose of heroin in Khorog costing less than a bottle of vodka. Opioid overdose among PWID in Tajikistan is a serious issue that appears to be substantially underestimated and inadequately addressed at the policy and practice levels. In integrated bio-behavioural surveys (IBBS), HIV and HCV prevalence in both Kulob and Khorog varied widely over a short period of time, raising questions over the quality and reliability of these data. Access to opioid substitution therapy (OST) and antiretroviral therapy (ART) by PWID is either lacking or inadequate. Very few women who inject drugs access needle and syringe programmes in Kulob and Khorog. HCV treatment cannot be afforded by the overwhelming majority of PWID due to high costs.

Conclusion: Tajikistan IBBS data point to the potential problems in using composite national prevalence as an adequate reflection of the HIV epidemic among PWID in the country and highlight the importance of examining site-specific prevalence rates for better understanding of the dynamics of the epidemic over time as well as potential problems related to the reliability of data. Furthermore, our analysis highlights that in a country where almost all PWID inject opiates, agonist treatment should be an intervention of choice. Scaling-up both OST and ART coverage must be seen as the top priority for reducing HIV prevalence and incidence in Tajikistan. Naloxone distribution programmes need to be expanded and drug treatment, harm reduction and HIV services that meet the specific needs of female injecting drug users should be put in place.

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Introduction

The Republic of Tajikistan, the smallest and the poorest of the Central Asian Republics, continues to face intertwined epidemics of substance use and HIV. Political and civil unrest following the fall of

the Soviet Union in 1991, poor socio-economic conditions, and its location on the main heroin trafficking route from Afghanistan have all contributed to the availability of cheap heroin and high rates of injecting drug use in the country. Among the Central Asian states, Tajikistan shares the longest border with Afghanistan (1344 km).

Economic development has been slowly improving, however a significant proportion of its 8 million inhabitants live below the poverty level with per capita gross domestic product (GDP) estimates as low as 872.3 USD (World Bank, 2013). It is estimated that more than 1 million Tajik people work as migrant labourers, primarily in Russia and Kazakhstan, and about half of the country's

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GDP comes from migrants' remittances (National Coordination Committee to Combat HIV/AIDS, Tuberculosis and Malaria in the Republic of Tajikistan, & Ministry of Health of the Republic of Tajikistan, 2013; World Bank, 2013). According to recent World Bank estimates for Central Asian republics for the year 2011, Tajikistan's health expenditures per capita in purchasing power parity (constant 2005 international) were the lowest among all five countries of the region (World Bank, 2013). Total health expenditures per capita (current USD) were 54.9 USD in 2012, ranking Tajikistan as the lowest in the European region (European average – 2349 USD) (UNDP, 2014).

Similar to other Central Asian countries, research on substance use and HIV/AIDS has been scarce in Tajikistan. Moreover, most of the research on these topics that is available has been conducted in the capital, Dushanbe (Vickerman et al., 2014; Beyrer et al., 2009; Stachowiak et al., 2006). The data on substance use and HIV in Tajikistan that are available locally as unpublished or grey literature vary widely in quality due to methodological differences that affect their reliability and validity. To address these gaps in our knowledge on situations beyond the national capital of Tajikistan, the present paper aims to analyse data on substance use and related problems in two regional (oblast) capital cities situated on major drug trafficking routes, and severely affected by both drug injection and HIV epidemics: the city of Kulob (Khatlon Oblast), with a population of 98,500 people, located about 70 km north from the Afghan border, and the city of Khorog with about 28,600 inhabitants (Gorno-Badakhshan Autonomous Oblast (GBO) in the Pamir mountains) (Tajik Presidential Statistics Agency, 2013). Khorog is situated on the Panj River, which represents a natural border with the Badakhshan region of Afghanistan. The paper will review and synthesize substance use and HIV/AIDS related information available for these cities and supplement it with data from focus group discussions.

Methods

Literature review

We searched the peer-reviewed and gray literature for information regarding injecting drug use and HIV in Kulob and Khorog. A PubMed search of publications in the previous 10 years that included the search terms, Tajikistan AND (hiv OR idu OR pwid OR heroin), returned 34 publications. However, when the search was limited to publications that included Khorog or Kulob, the search returned zero results. We searched the Web of Science databases for Khorog or Kulob. That search only returned one result, and it was unrelated. A search of SCOPUS (Elsevier Science) for Khorog or Kulob returned three results, none of which were relevant. We also searched Google Scholar using the same search strategy. The search returned 125 results (2004–2014) and 70 results when it was limited to the last 5 years (2009–2014). Most of these reports only mentioned Kulob and Khorog as points along major drug trafficking routes for Afghanistan opium and heroin. Very few provided any details regarding drug use or HIV in these cities among PWID. The major conclusion from these searches was that very little has been published on HIV, heroin, or other drug use in Kulob or Khorog. We also reviewed published and unpublished programme and country reports, locally available power point presentations, and stand-alone publications that focused fully or in part on substance use and/or HIV/AIDS in Tajikistan and included the Khatlon and GBO regions. After we completed the search, we analysed and synthesized data from the different sources.

Focus group discussions

The focus groups were conducted in Kulob and Khorog as part of the formative phase of a study funded by the U.S. National

Institute on Drug Abuse. The aims of the parent study are to work with needle and syringe programmes (NSPs) to develop and test strategies for implementing the recommendation of the World Health Organization that calls for offering low dead space syringes to NSP clients (WHO, 2012). The focus group discussions were held at local low threshold programs run by NGO "Jovidon" in Kulob and NGO "Volunteer" in Khorog. Eligibility criteria for participation in a focus group included a minimum age of 18 years and self-reported drug injection in the previous 30 days. Six focus groups were conducted in each city, with 6–10 participants per group ($n=100$). Participants were recruited by outreach workers for the NSPs in Kulob and Khorog. All of the focus group discussions were conducted in Russian and Tajik and were recorded. The recordings were transcribed verbatim and translated into English. All of the activities were approved by RTI's Office of Human Research Protection and the Tajik Republican Bioethics Committee. The main purpose of the focus groups was to assess the characteristics (e.g. barrel capacity, needle length, needle gauge, dead space) of the needles and syringes used in each city, the acceptability of different designs for reducing dead space, and the willingness of PWID to switch from standard high dead space needles and syringes to low dead space alternatives. The focus group discussion guide included questions regarding the types of drugs injected, the availability of drugs, drug overdoses, the drug preparation process, the volumes of fluid injected, sources of needles and syringes, syringe sharing and cleaning practices, and travel to other cities and countries. The guide also included very detailed questions regarding the needles and syringes people used, why they used them, and the acceptability of other needle and syringe designs. For this paper, analyses were limited to responses to questions regarding availability of drugs, substance use and related problems in Kulob and Khorog. Responses were coded by two of the authors (AL & DO). Discrepancies were resolved through discussion among three authors (AL, DO, WZ). The findings were used to supplement data from the literature review.

Results

Problem drug use prevalence estimates

In the Central Asian republics, including Tajikistan, problem drug use is generally defined and understood as "injecting opiate use" (Zabransky, Mravcik, Talu, & Jasaitis, 2014). The calibrated estimate (using calibration multiplier) of the size of the population of people who inject drugs in the city of Kulob was calculated in 2009 and is 1100 PWID. For Khorog, the calibrated estimate was 2100 PWID (APMG, 2009). These appear to be the only estimates made specifically for these two cities, whereas all previous estimates were either made for the national capital city of Dushanbe or were national estimates for Tajikistan developed through extrapolation of data from several large cities other than Kulob and Khorog (APMG, 2009; Latypov, 2008). Overall, for the Republic of Tajikistan, the latest available estimate of the size of the PWID population is 25,000 people, with a possible range of 20,000–30,000 (APMG, 2009).

Drugs used by people who inject drugs

In Kulob, participants in six focus group discussions ($n=53$) reported almost unanimously that the only narcotic substance injected by PWID was heroin. Only one participant mentioned that he knew someone who injected "eye-drops," Tropicamide. Some participants also reported that there is a "crystal-like, transparent heroin" available on the market, which "shines like a glass" and is sometimes referred to as "synthetic heroin", and which has a higher potency than a 'regular' heroin. However, none of respondents were

able to clarify whether this substance was heroin or a different substance marketed as such. In previous years, some people who could obtain acetic anhydride used it to convert raw opium into crude heroin for injection. While raw opium was also available on the market, focus group participants reported that the availability of acetic anhydride has decreased dramatically, and it was much easier to obtain heroin now. Between one fifth and one quarter of participants indicated that Dimedrol (Diphenhydramine) tablets were often crushed into heroin solution for various reasons, often to get a better high. None of the participants mentioned ever using or knowing anyone who used amphetamine or methamphetamine and other amphetamine-type stimulant. Furthermore, very few participants reported knowing anyone who administered heroin through a non-injection route.

In Khorog, according to participants of six focus group discussions ($n=47$), heroin was the only drug injected by PWID. Similar to Kulob, no use of amphetamine or methamphetamine or other amphetamine-type stimulant was reported, whereas the practice of adding dimedrol tablets into heroin solution was reported, but less commonly than in Kulob.

In an earlier study (Latypov, 2011) among drug users and dealers, respondents from Kulob also mentioned that heroin was more readily available on the market than other opiates, and that it was the primary drug of choice for PWID, with injecting use of other opiates being very rare.

These reports are consistent with data from the 2011 integrated bio-behavioural survey (IBBS) or, as known locally, “*dozornyi epidemiologicheskii nadzor*” among PWID in Kulob ($n=210$) and Khorog ($n=360$), in which 100% of respondents from both sites reported heroin as the only drug they injected (Ministry of Health of Tajikistan & Republican AIDS Centre, 2012).

In 2009, when both Kulob and Khorog were also among eight sites included in IBBS among PWID ($n=1657$), 98.4% of the total sample reported regular injection of heroin (Soliev, 2010). In another study conducted in 2009 in seven cities ($n=1690$), including Kulob and Khorog, the majority were heroin users as well, with 69% of respondents across all sites (site-specific data for Kulob and Khorog not available) reporting having never injected home-made opioid preparations (e.g. ‘hanka’) (APMG, 2009).

Prices and purity

According to participants in the focus group discussions in Kulob, there was substantial variation in street prices both for one dose (“shponka”) and for one gram of heroin. Depending on the quality, one gram of heroin could cost between 40 somoni (about 8 USD) and 100 somoni (about 20 USD). Heroin that was sold at 100 somoni per gram was considered as “unadulterated”. However, most commonly, one gram was sold in Kulob at the price of 50 somoni and was normally of “poor quality”. The price of one dose varied from 10 to 25 somoni (2–5 USD), with the most common price named as 20 somoni (4 USD).

When sold at the street level to local drug users, heroin, according to focus group discussion participants, was heavily adulterated. Some participants suggested that some heroin that was trafficked to Kulob across the border with neighbouring Afghanistan already contained some adulterants, and was not “pure”. However, the majority of participants believed that local petty drug dealers, “*barygas*”, were the ones who “cut heroin with all sorts of mixtures and substances” in order to increase their profits. As participants believed, adulterants used to “cut” heroin included wheat flour, sugar, lime used in construction, as well as medications such as paracetamol, dimedrol, baralgin, and somnol, and calcium chloride. According to participants, some of this adulterated heroin, when mixed with water, would look like a “jelly” or solidify soon thereafter and look like “dough” or like “alabaster”.

In Khorog, prices for heroin did not seem to be as varied as in Kulob, with one gram of heroin in Khorog costing 50 somoni (about 10 USD), and one dose sold for the price of 10 somoni (about 2 USD). These prices were reported by the majority of focus group discussion participants in Khorog, with some reporting that they had not heard of heroin being sold at other prices on the streets of contemporary Khorog and a few others saying that one gram could be as expensive as 70 somoni (14 USD).

The above reported prices in the two cities are higher than the ones that were cited by some users in 2011, when the price of one dose of heroin in both Kulob and Khorog was reportedly about 1 USD (Latypov, 2011).

As in Kulob, participants stated that the quality of heroin has gone down significantly when compared to some 5, 10, or 15 years ago. On the streets, petty dealers would call their commodity “heroin” but what they sold was actually heroin cut with various adulterants, most commonly with sugar and/or various medications, such as dimedrol, analgin, paracetamol and calcium chloride.

These insights provided by PWID from Kulob and Khorog are to some degree consistent with annual drug reports published by the Tajik Presidential Drug Control Agency for the last 5 years. According to these reports, heroin seized in Tajikistan contained such medications admixtures as caffeine, dextromethorphan, paracetamol and chloroquine (DCA, 2013, 2014); caffeine, dextromethorphan, paracetamol, “which possess a property to enhance the action of heroin”, as well as sugar, analgin, dimedrol (with the last two also enhancing the “action of heroin”) and chloroquine (DCA, 2012); caffeine, paracetamol and dextromethorphan (DCA, 2011); and caffeine and paracetamol, with DCA suggesting that Afghan heroin producers, locally in Afghanistan, were “themselves likely to add caffeine and paracetamol to heroin” (DCA, 2010).

Women who inject drugs

When we conducted focus group discussions in Kulob, none of the participants ($n=53$) were female. Staff of the local partner organization (NGO “Jovidon”) who helped recruit participants attributed this to the fact that women drug users were especially hard-to-reach and that many avoided direct contacts with NSPs and disclosing their drug user status for fear of abuse and discrimination from family members, community members, and male drug users. In Khorog, none of the focus group discussion participants ($n=47$) were women either, and local partner organization staff (NGO “Volunteer”) provided similar explanations and reported that only three female injecting drug users were known clients of the local NSP, and all of them were now participating in an opioid substitution therapy (OST) programme.

Earlier studies of PWID in both cities have documented similar difficulties in recruiting women who inject drugs. For example, all 215 participants recruited in Kulob in 2009 as part of a multi-city study were male; likewise only 5% out of 311 participants in Khorog were female (APMG, 2009). However, a more recent analysis of drug markets in Kulob revealed the presence of at least nine female drug dealers operating in Kulob, who perhaps would be particularly attractive to female customers (Latypov, 2011). With many petty drug dealers also selling drugs to support their drug using habit, this finding supports the explanations given by our local partner organization in Kulob that women drug users would be difficult to access. It also provides clear evidence that women make up some, albeit unknown, proportion of the PWID population in Kulob.

Prevalence of HIV, HCV and syphilis among people who inject drugs and risk behaviours

By the end of 2012, 4674 cumulative HIV infections (3486 among males and 1188 among females) were diagnosed in

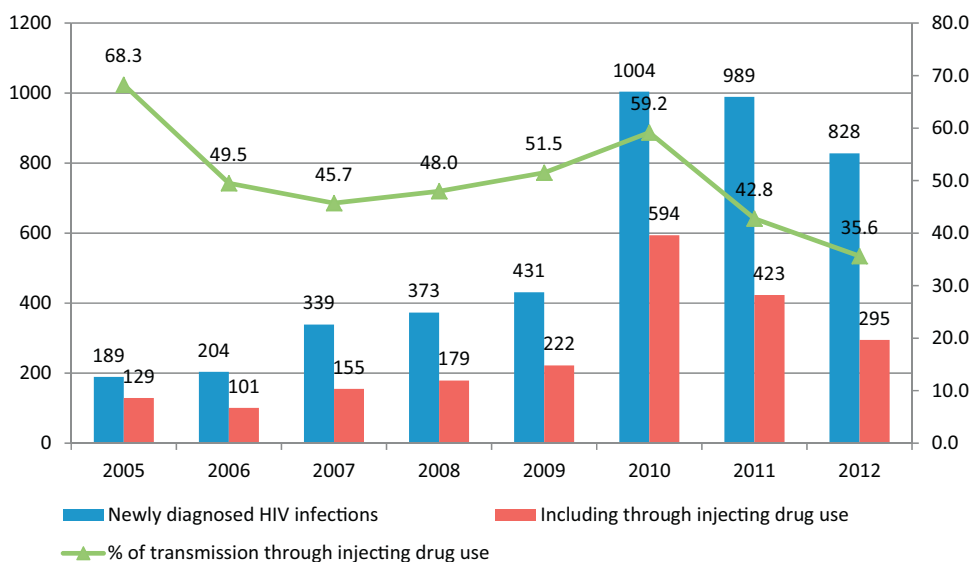


Fig. 1. Newly diagnosed HIV infections in Tajikistan, by year and mode of transmission (injecting drug use), 2005–2012.

Tajikistan (50.7 per 100,000). These included 2342 (50.1%) among PWID that were attributed to sharing unsterile drug injecting equipment; 1447 (31.0%) infections were attributed to unprotected sex; 96 (2.1%) were mother-to-child transmissions; 13 (0.3%) were acquired through blood transfusion, and in 776 cases (16.6%) the transmission mode was unknown (Republican AIDS Centre, 2013). However, while half of cumulative diagnosed HIV infections were attributed to injecting drug use, the proportion of new diagnosed HIV infections attributed to unsterile drug injecting equipment has declined over the past eight years, from 68.3% in 2005 down to 35.6% in 2012 (Fig. 1).

Of the 4674 HIV infections diagnosed in the country by 2012, 1036 cases (747 among males and 289 among females) were diagnosed in Khatlon Oblast (31.0 per 100,000), and 304 cases (267 among males and 37 among females) were diagnosed in Gorno-Badakhshan Autonomous Oblast (113.4 per 100,000). Of the 1036 HIV infections diagnosed in Khatlon Oblast, 423 were diagnosed in Kulob, including 266 (62.9%) cases among PWID. Of the 304 HIV infections diagnosed in Gorno-Badakhshan Autonomous Oblast, 186 were diagnosed in Khorog, including 173 (93.0%) cases among PWID (Republican AIDS Centre, 2013).

Starting from 2007, both Kulob and Khorog were included as sites for IBBSs that have been conducted annually in Tajikistan between 2005 and 2011, and biannually thereafter. Sample sizes in Kulob and Khorog were 200 and 360 participants, respectively, although the sample size in Kulob was changed to 210 participants in 2011. Participants in IBBSs were tested for HIV, HCV and syphilis and asked about sexual and drug injection behaviours, knowledge and access to services and prevention commodities. Among PWID tested in the IBBS, the prevalence of HIV in Kulob was 18% in 2007, 34.5% in 2009, and 6.2% in 2011. Similarly, HCV and syphilis prevalence in the samples peaked in 2009 before going down to their lowest points in 2011 (Fig. 2). In Khorog, the prevalence of HIV among PWID in the IBBS samples was 30% in 2007, 13.8% in 2010, and 24.4% in 2011. Prevalence of HCV and of syphilis in the samples followed a similar pattern (Fig. 3) (Abdulloev, Dekhkanova, & Ayombekov, 2008; Abdulloev, Rajabov, & Shabonov, 2009; Ministry of Health of Tajikistan & Republican AIDS Centre, 2012; Tumanov, Asadulloev, & Chariev, 2010).

Available data on risk behaviours suggest that between 2007 and 2009, 38%, 26% and 15% of participants in the IBBS in Kulob reported using a shared syringe/needle during the last injection, whereas in

Khorog, 6%, 1% and 0.8% of participants reported using a shared syringe/needle during the last injection in 2007, 2008 and 2009, respectively (more recent data not available). While the reported use of a shared syringe/needle during the last injection decreased in Kulob, the percentage of PWID who reported sharing drug injection equipment other than syringes and needles during the last injection increased from 53% in 2007 to 75% in 2008 and 91% in 2009. In Khorog, the percentage of PWID reporting sharing drug injection equipment during the last injection decreased from 17% in 2007 to 3% in 2008, and then increased to 8.3% in 2009 (Abdulloev et al., 2008, 2009; Tumanov et al., 2010).

Drug overdoses

During focus group discussions with PWID in Kulob, many respondents indicated that overdoses were common. The main risk factor cited was the combined use of heroin and alcohol (most commonly vodka). Other reported risk factors included heroin use after a period of abstinence as well as occasional significant peaks in the quality of street heroin. Some participants also mentioned that a “crystal-like, transparent heroin” or “synthetic heroin,” which was more potent, often caused overdoses when used intravenously.

Furthermore, interviews conducted with staff and clients of NSPs operated by NGO “Apeyron” in January 2014, indicated that between 10 and 12 drug overdoses, including 3–4 fatal ones, were known to have occurred in the previous two months. According to their reports, increases in price of heroin led some users to stop using heroin temporarily which decreased their tolerance. This reportedly increased the risk of overdose when they resumed heroin use (NGO “Apeyron”, 2014).

The situation in Khorog was similar as far as risk factors reported by the focus group participants were concerned, although, in the words of focus group discussion participants, overdoses were not “so common” and did not appear to occur as often as in Kulob. While caution is needed when interpreting data based exclusively on participants’ perceptions, according to the analysis conducted by NGO “Volunteer”, a total of 29 cases of drug overdoses were registered in Khorog between November 2010 and November 2011 (NGO “Volunteer”, 2011).

Data from the latest IBBS among PWID in Kulob ($n=210$) and Khorog ($n=360$) conducted in 2011 also point to the high prevalence of drug overdoses in Kulob, with 26.9% reporting a history

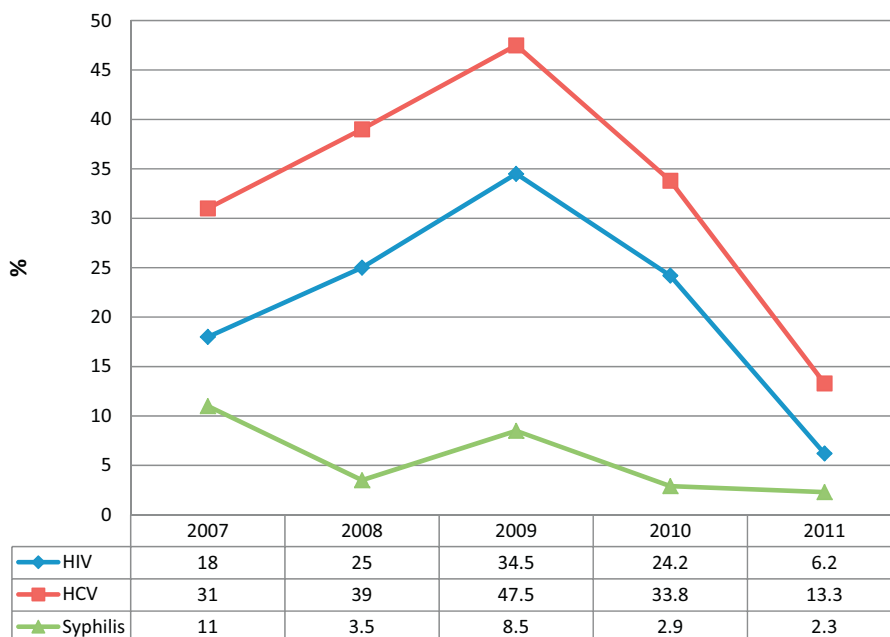


Fig. 2. Prevalences of HIV, HCV and syphilis among PWID in Kulob, 2007–2011, IBBS data.

of a non-fatal overdose in the past 12 months, whereas for Khorog the reported prevalence is 12% (Khasanov et al., 2012). However, in another survey conducted among PWID ($n = 43$) in Khorog, as many as 56% reported a history of a non-fatal overdose in the past 30 days (Ataiants, Latypov, & Ocheret, 2011).

Drug treatment and other responses to health consequences of injecting drug use

Formal drug treatment in Tajikistan is provided by a network of publicly funded drug treatment facilities, generally termed “narcological” institutions in the post-Soviet countries. In both Kulob and Khorog, there are Oblast narcological centres, with 20 in-patient beds in the former and 30 in the latter. The services offered by these

centres are essentially limited to the provision of detoxification. However, since June 2011, the Khorog-based Oblast narcological centre has also been operating a pilot OST programme. By the end of 2011, there were 44 clients enrolled in the OST programme in Khorog, including one woman (Nidoev, 2012). No OST is available in Kulob, although local authorities are reportedly considering launching a programme in the near future.

Access to medical care and psychological support appears to be particularly problematic in Kulob, where in 2011, only 1% and 11% of the IBBS sample ($n = 210$) reported receiving medical care and psychological support at least once in the past 12 months, respectively. The situation was reportedly better in Khorog ($n = 360$), where these indicators were 23% and 78%. Access to condoms was relatively low in both cities, with only 20% of the sample in Kulob

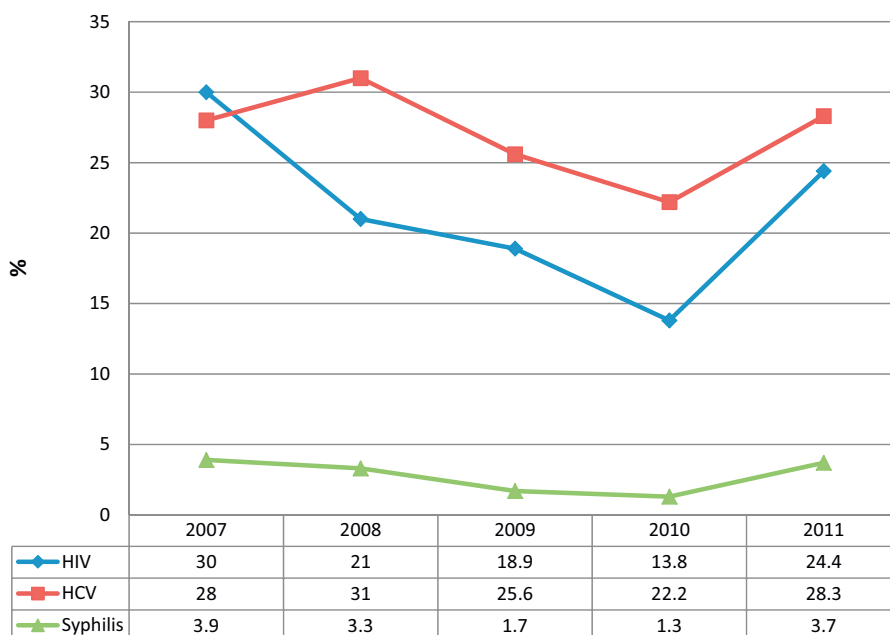


Fig. 3. Prevalences of HIV, HCV and syphilis among PWID in Khorog, 2007–2011, IBBS data.

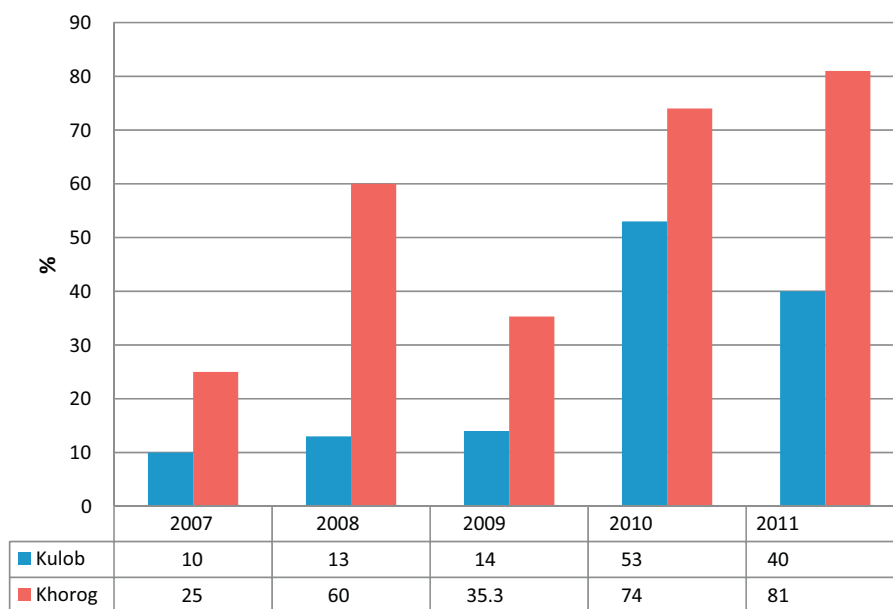


Fig. 4. Percentage of PWID who reported that they had an HIV test in the past 12 months.

and 40% in Khorog reporting receiving free condoms at least once in the past 12 months (Ministry of Health of Tajikistan, 2012). Similarly, reported coverage of HIV testing appears to be substantially higher in Khorog than in Kulob (Fig. 4), as is the percentage of PWID who report receiving sterile syringes and needles from NSPs (Fig. 5) (Abduloev et al., 2008, 2009; Ministry of Health of Tajikistan & Republican AIDS Centre, 2012; Tumanov et al., 2010).

In both Kulob and Khorog, naloxone is being distributed by the local NGOs through a community-based distribution model. In Kulob, NGOs “Jovidon” and “Sudmand” receive naloxone from UNDP through funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), whereas NGO “Anis” also receives naloxone from a USAID-funded “Dialogue on HIV and TB” Project

(Kan et al., 2014). Peers/friends appear to be the first to respond to overdose in the majority of cases in Kulob (91%), as reported by the participants of the latest IBBS in 2011 (Ministry of Health of Tajikistan & Republican AIDS Centre, 2012). In Khorog, where all naloxone ampules are available through funding from GFATM, NGO “Volunteer” operates a community-based naloxone distribution programme. It also supplies emergency aid departments, ambulances and intensive care units with naloxone and provides overdose prevention education. Unlike in Kulob, ambulance workers are reported by PWID as first responders to overdose in the majority of cases (61%) in Khorog, followed by peers/friends (39%) (Ministry of Health of Tajikistan & Republican AIDS Centre, 2012). According to data collected by NGO “Volunteer” for several

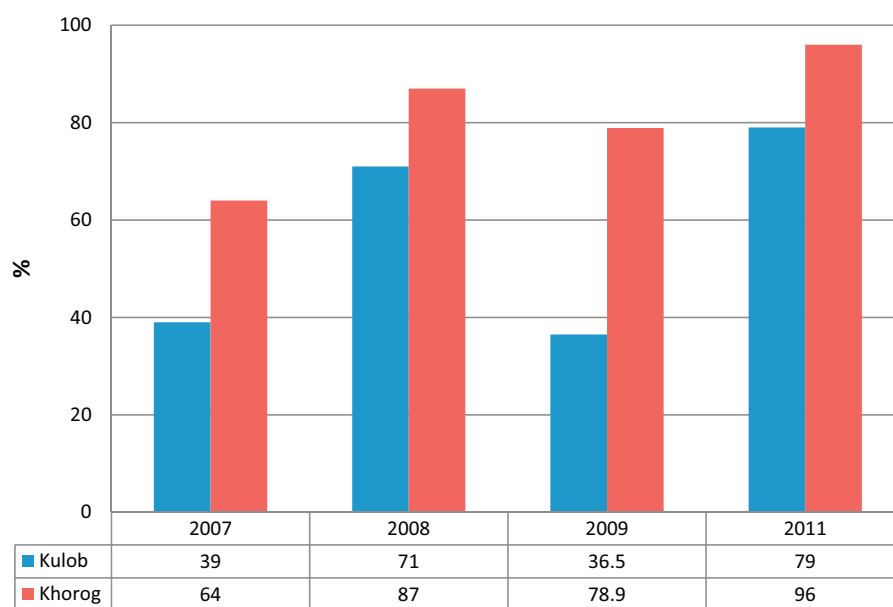


Fig. 5. Percentage of PWID who reported receiving IEC and sterile syringes and needles from NSPs at least once in the past 6/12 months. Data for 2009 and 2011 are available only for “at least once in the past 12 months”, whereas data for 2007–2008 are available for “at least once in the past 6 months”. No data are available for 2010. Data for 2011 are for receiving “sterile syringes and needles”.

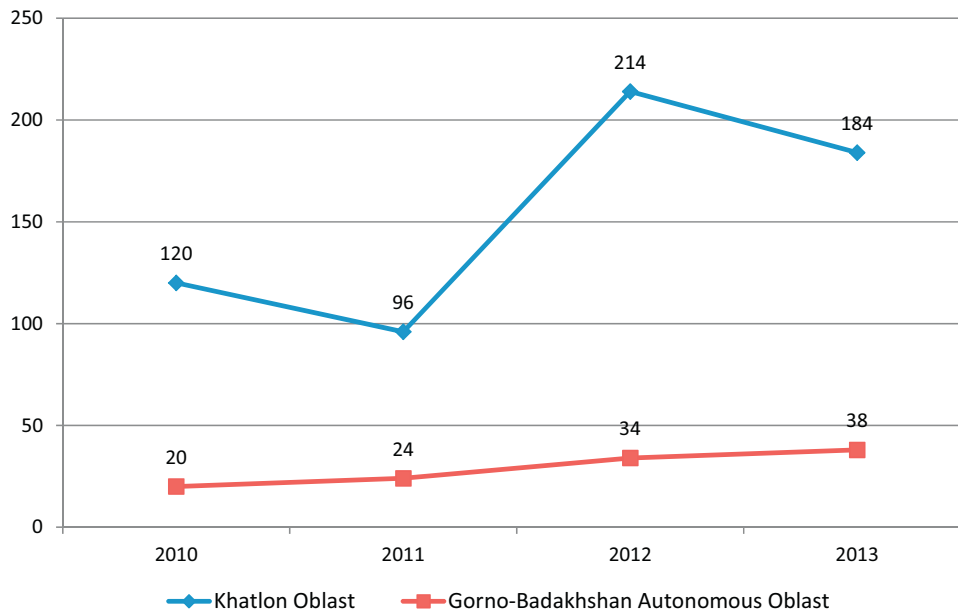


Fig. 6. People arrested for drug-related offences in two Oblasts, 2010–2013.

districts of Gorno-Badakhshan Autonomous Oblast, including the city of Khorog, the number of fatal drug overdoses registered in the region decreased from 27 cases in 2006 to 6 cases in 2011 (NGO “Volunteer”, 2011).

According to reports of the national authorities, the total number of sterile syringes and needles distributed in Tajikistan between 2010 and 2012 was close to 10 million, with 2,774,697 syringes and needles distributed in 2010, 2,207,173 in 2011 and 4,981,270 in 2012 (Ruziev, 2013). This makes about 111, 88 and 199 syringes and needles reportedly distributed per estimated PWID in each year respectively, although it remains to be seen whether or not the sudden leap in the number of distributed syringes and needles that took place in 2012 through external donor funding (as stakeholders in the country aimed to bring this number closer to the estimated level for effective HIV prevention in PWID) would be sustained over a long run. Importantly, as data for sterile syringe and needle distributions were reported by Tajik authorities only at the national level, we were unable to extract and examine city-specific information for Kulob and Khorog.

Between 2006 and 2012, 1505 people were enrolled in antiretroviral therapy (ART) programme in Tajikistan, including 309 people in Khatlon Oblast and 111 people in Gorno-Badakhshan Autonomous Oblast (Republican AIDS Centre, 2013). However, only 1044 of those ever enrolled in ART were still on ART by the end of 2012, with high case fatality rates among people on ART cited as one of the reasons for this (UNDP, 2014). In Khatlon Oblast, 52 patients were enrolled in 2010, including 20 (38.5%) PWID, whereas 67 were enrolled in 2011, including 16 (23.9%) PWID. In Gorno-Badakhshan Autonomous Oblast, 17 patients were enrolled in 2010, including 6 (35.3%) PWID, while 26 were enrolled in 2011, including 16 (61.5%) PWID (Khasanov et al., 2012).

The state does not cover the costs of HCV treatment for HCV-infected patients, and such treatment cannot be afforded by the overwhelming majority of PWID due to high costs.

Drug-related offences and drug seizures

In total, 988 people [including 31 women (3.1%)] were arrested for drug-related offences in Tajikistan in 2013, – almost as many (989) as in 2012. While the majority of these arrests took place in the capital city of Dushanbe and in Soghd Oblast, 184

people were arrested in Khatlon Oblast and 38 people were arrested in Gorno-Badakhshan Autonomous Oblast in 2013 (DCA, 2014). Overall, over the past four years, the numbers of people arrested on drug-related charges increased both in Khatlon and in Gorno-Badakhshan Autonomous Oblasts, although considerably higher numbers of people had been arrested in the former than in the latter (Fig. 6) (DCA, 2014).

During the past four years, the largest proportions of drugs were seized in Khatlon Oblast when compared to other regions of the country. In 2013, 61.2% of the total amount of drugs seized in Tajikistan were seized in Khatlon Oblast, up from 40.7% in 2010. In contrast, the share of drugs seized in Gorno-Badakhshan Autonomous Oblast ranged between 2% and 7% of the total amount of drugs seized in Tajikistan between 2010 and 2013 (DCA, 2014). Specific data available for Kulob and Khorog cities indicate that in Kulob, the share of seized drugs ranged between 3% and 6% of all drug seizures made in Khatlon Oblast in 2011 and 2012, whereas in Khorog, drug seizures peaked at 8% of all drugs seized in Gorno-Badakhshan Autonomous Oblast in 2011 (DCA, 2012). Thus, in both Oblasts, the majority of drugs seized by the law enforcement bodies were seized in locations other than Kulob and Khorog cities, respectively.

Discussion

Our comparative analysis of drug scenes, drug use and drug-related infectious diseases in Kulob and Khorog reveals both similarities and differences in these two Tajik cities – the regional capitals of Khatlon and Gorno-Badakhshan Oblasts – situated along the opiate trafficking routes from Afghanistan. Furthermore, this analysis raises a number of issues critical to our interpretation and understanding of available data as well as the situations both in these two cities and in the country in general.

First off, our findings paint a very contradicting picture, whereby Khorog is ‘doing better’ than Kulob on almost all indicators and yet has a higher prevalence of HIV, HCV and syphilis among PWID as per the results of the latest IBBS conducted in 2011. Thus, a larger proportion of PWID reported high HIV and HCV risk behaviour (shared use of needles, syringes and other injecting equipment) in Kulob than in Khorog; a larger proportion of PWID reportedly received medical care and psychological support in Khorog than in Kulob;

reported HIV testing and NSP coverages as well as access to condoms were higher in Khorog than in Kulob; pilot OST programme is available in Khorog whereas it is completely unavailable in Kulob; drug-related incarcerations (and associated risks of transmission of blood-borne infections) were less common in Gorno-Badakhshan Autonomous Oblast than in Khatlon Oblast; and, finally, response to drug overdoses seemed to be better organised in Khorog. This major contradiction raises a question of how to explain these higher prevalence rates of HIV, HCV and syphilis in Khorog that need to be addressed.

In relation to the above, our findings reveal significant variations in HIV and HCV prevalence in the IBBS samples in both Kulob and Khorog over a short period of time. HIV and HCV prevalence in a population of PWID within a geographic area may decrease due to HIV and HCV positive PWID leaving the population due to death, geographic relocation, or leaving the population for another reason (e.g. no longer injecting drugs) at a rate that exceeds the number of new infections. HIV and HCV prevalence may also decrease if there were a large influx of new members (e.g. new people start injecting drugs) who are HIV and HCV negative. Otherwise, even if incidence is relatively low, prevalence is likely to continue to increase or remain constant. While it is possible that the rapid decreases in HIV and HCV prevalence in Kulob between 2009 and 2011 and in Khorog between 2007 and 2010 are due to HIV and HCV positive PWID leaving the population or a large influx of new PWID, we cannot rule out the possibility that the decreases reflect variability in the sampling. Sampling-related issues might also explain a sharp increase in HIV and HCV prevalence in Khorog and a dramatic decrease in prevalence in Kulob in the year 2011, which occurred against the backdrop of consistently and considerably higher coverage levels in the former. However, there might be more profound problems with fluctuating prevalence rates in Kulob and Khorog, and in order to get a full picture, findings from Kulob and Khorog need to be seen in the context of reported prevalence rates at all other IBBS sites across the country. As Fig. 7 demonstrates (Latypov, 2014), reported HIV prevalence rates across nearly all IBBS participating sites may change considerably from one year to another, thus pointing to a much broader phenomenon and raising concerns about the quality and reliability of Tajikistan IBBS data. These data also highlight the unsuitability of using a composite national prevalence in describing the HIV epidemic among PWID in Tajikistan (Platt et al., 2013), as on the one hand, site-specific prevalence rates may provide critical insights and help explain the dynamics of the epidemic, whereas on the other hand, data aggregation may serve to camouflage some extreme fluctuations of HIV prevalence in various cities over time.

Furthermore, our analysis suggests that despite some variations in prices, heroin appears to be readily available in both Kulob and Khorog, with one dose of heroin in Khorog costing less than a bottle of vodka (with prices for most brands starting at and above 12 somoni or about 2.4 USD per bottle). Indeed, although its street-level price seems to have increased when compared to 2011, heroin is the most commonly injected drug throughout Tajikistan, being used by at least 95% of PWID enrolled in the latest IBBS (2011) at any of the 10 participating sites (Ministry of Health of Tajikistan, 2012). While the price of one dose of heroin is cheaper in Khorog than in Kulob (indicating a higher availability in the former), the quantities of drugs seized in Gorno-Badakhshan Autonomous Oblast in 2010–2013 were, however, significantly lower than in Khatlon Oblast, – in fact, they were among the lowest in Tajikistan – as were the numbers of people arrested on drug-related charges. In this case, this rather contradictory situation may suggest that drug markets in Khorog, and more generally in Gorno-Badakhshan, are experiencing less interference from counter narcotics activities of Tajik law enforcement authorities. In Gorno-Badakhshan Autonomous Oblast, the reasons for less active counter narcotics

operations could be multiple. These can range from limited availability of law enforcement human and technical resources, to the nature and specific patterns of operation of organized criminal groups and drug trafficking networks in Gorno-Badakhshan (De Danieli, 2010), which may possibly be characterised by (i) deeper connections with the corrupt central and/or regional state elites and representatives of ‘organs of power’; and/or (ii) stronger independence, military power and ability to intimidate the local branches of law enforcement agencies in the region. All of the above can be responsible for Gorno-Badakhshan-based drug trafficking rings’ stronger immunity from the policing and their ability to sell at lower prices, which do not have to offset the cost of police “patronage”.

Another potentially important factor is the police corruption. Corrupt officers, who target street-level drug dealers and then demand bribes for providing “protection” to their drug business, may contribute to the higher prices that were reported in Kulob. This is supported by findings from a recent study on drug trade and drug markets in Tajikistan, which suggest that the level of the police involvement in street-level drug trade in Kulob is significant (Latypov, 2011). Thus, respondents from that study stated that the majority of drug dealers in Kulob either pay the “patronage fees” to the local police officers or receive their drug supplies directly from the corrupt police officers (the so called “red heroin”). Finally, closer geographic proximity of Khorog to the Tajik-Afghan border may also play some role in the reported price differences between Kulob and Khorog cities in 2014, although findings from an earlier study conducted in Tajikistan do not seem to support this explanation (Latypov, 2011).

Very few women who inject drugs access drug treatment and NSPs in Kulob or Khorog. This is a concern because several reports have noted that compared with males who inject drugs, women who inject drugs are often at greater risk through unsafe injection practices and unprotected sex (Ashley, Marsden, & Brady, 2003; Otiashvili et al., 2013). Evidence from Tajikistan shows that the HIV epidemic is spreading from men who inject drugs to their female partners many of whom do not inject drugs. The percentage of new HIV infections diagnosed in Tajikistan among PWID has been decreasing (Fig. 1) while the percentage of new cases attributed to unprotected sex increased significantly from 13.2% in 2005 to 45.2% of the newly diagnosed HIV infections in Tajikistan in 2012. Furthermore, this reported increase in the percentage of new cases through unprotected sex takes place in the context of the growing share of HIV infections newly diagnosed among women. Only 8.5% of all HIV infections newly diagnosed in 2005 were among women, whereas in 2012, women made up 34.5% of HIV infections newly diagnosed during that year (Republican AIDS Centre, 2013). Given the significant HIV risks documented both among women who inject drugs and non-injecting female partners of men who inject drugs in Central Asian republics, there is an urgent need to develop harm reduction and HIV services that meet female-specific needs and that are offered both on individual basis and/or together with male partners, through couple-based modalities that take into account the dyadic contexts of sexual and drug use behaviours (El-Bassel et al., 2014).

Based on data that we collected from partner NGOs and from focus group discussion participants conducted in May 2014, as well as from official reports on fatal overdoses, opioid overdose among Tajik PWID is a serious issue that appears to be substantially underestimated and inadequately addressed at the policy and practice levels. According to official statistics, there was a decline in fatal opiate overdoses in Tajikistan from 135 cases registered in 2006 to 78 cases in 2010 and 39 cases in 2011 (Khasanov et al., 2012). The national drug control strategy for the years 2013–2020 does not mention drug overdoses (DCA, 2013). However, official statistics on drug overdoses in Tajikistan are unreliable, with various

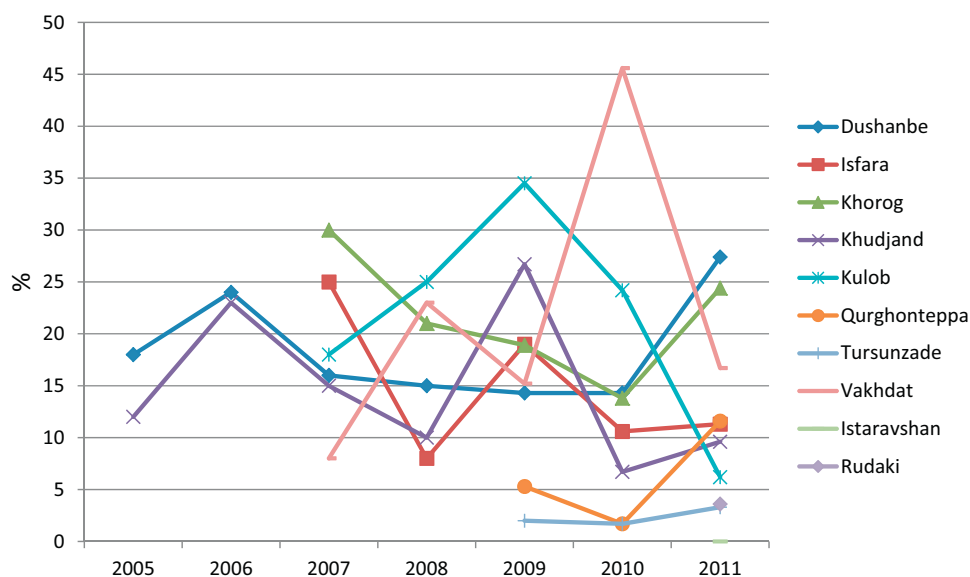


Fig. 7. HIV prevalence among PWID in Tajikistan, IBBS data, by site and year.

official reports providing conflicting information (e.g., 16 cases of fatal overdoses registered in Tajikistan in 2010 as reported by DCA, 2011). Furthermore, there is substantial underreporting of deaths in Tajikistan as suggested by one recent study (Mravcik et al., 2014), and autopsies are only conducted in Tajikistan in about 2% of all deaths (Khasanov et al., 2011). While findings from local studies based on data self-reported by PWID may as well be conflicting, they do point at the same problem of significant underestimation of opioid overdoses in the country. Thus, self-reported data collected among PWID in Tajikistan ($n=431$) suggest that both fatal and non-fatal overdoses in the country are grossly underreported in official statistics, with 34.1% of the sample reporting a history of overdose in the past 12 months and 25.1% witnessing someone die from an overdose in the past 12 months (PSI, 2010).

A range of cultural, religious, policy and practice-related barriers appear to contribute to significant overdose underreporting in Tajikistan (Ataiants et al., 2011). The high rates of opioid overdose reported in various studies increase the importance of programmes, such as naloxone distribution, that reduce fatalities due to opioid overdose. Findings from Tajikistan and Kyrgyzstan point to low wastage and high usage rates of naloxone distributed through pilot pharmacy- and community-based distribution approaches (Kan et al., 2014). It is of utmost importance, therefore, to prioritize overdose prevention at the national policy level and to expand naloxone distribution programmes to cover all regions of the country. Efforts should also be made to ensure timely reporting and forensic analysis of emerging drugs that might have serious overdose and other health-related implications, such as “synthetic heroin” (of unknown to drug users chemical composition) that apparently has been sold on the drug markets in Kulob until very recently.

Our analysis also indicates that access to HIV testing needs to be substantially improved, especially in Kulob, where less than half of PWID enrolled in the latest IBBS reported a history of HIV test in the past 12 months. Inadequate access to testing also leads to late initiation of ART by PLHIV in Tajikistan, where more than 50% of PLHIV who started ART were late presenters (UNDP, 2014). The recent WHO’s 2013 antiretroviral treatment guidelines, which recommend a CD4 threshold of 500 for initiation of HIV treatment, broaden the eligibility for ART considerably and would further decrease the current estimated ART coverage in Tajikistan.

The Government of Tajikistan estimated that 13,823 people were living with HIV in Tajikistan in 2012 (Ruziev, 2013), with these data indicating that only about 7.5% of the estimated PLHIV were receiving ART.

Coverage of PWID with OST is extremely low in Tajikistan and only about 1% of estimated PWID were enrolled in the programme as of end of 2012 (DCA, 2013). In a country where almost all PWID inject opiates, agonist treatment should be an intervention of choice. In addition, scaling-up both OST and ART coverage must be seen as the top priority for reducing HIV prevalence and incidence in the country. As recent modelling analysis for Tajikistan’s capital city of Dushanbe suggests (Vickerman et al., 2014), required coverage levels of key interventions for PWID are much lower when they are combined, and only about 10% coverage of NSP, OST and ART each would be required to achieve a 30% reduction in HIV incidence over 10 years. To reduce HIV incidence to less than 1% or HIV prevalence to less than 10% over 20 years, coverage of 23–34% of all three interventions combined would be required for Dushanbe. These targets are feasible even in a resource-constrained setting like Tajikistan (Vickerman et al., 2014). To meet these targets, Tajik authorities need to demonstrate their political will and to ensure that existing policy barriers for OST scale-up in both community and prison settings are removed rapidly, while also revisiting their current HIV spending and optimizing the investment mix through increased allocative and technical efficiency.

Concluding remarks

In conclusion, our analysis suggests that ‘going beyond the surface’ of the national aggregated data and examining drug scenes, drug use and related health consequences and responses at the regional level in two Tajik cities of Kulob and Khorog may not only elucidate insightful site-specific patterns and trends, but also serve as a powerful lens through which to explore ‘a bigger picture’ and to uncover issues with serious implications for the entire country. These issues include serious concerns over the quality and reliability of the IBBS data, the state-crime nexus and the corruption of law enforcement, vulnerable situation of women who inject drugs and non-injecting female partners of men who inject drug, significant underestimation of fatal and non-fatal drug overdoses, as well as inadequate availability of and access to OST and ART.

One of the lessons that we learned from this study is that the lack of data and the questionable reliability of available data can both create serious challenges for the entire process of decision-making and the development and implementation of targeted interventions to address substance use and related health consequences in Tajikistan. Clearly, there is a need for a critical appraisal and cross-examination of any information that is collected in Tajikistan both via routine official data collection mechanisms and as part of special studies that have recently been introduced and carried out in Tajikistan.

Nevertheless, results of the current study re-emphasize the severity of problems posed by widespread substance use phenomena in the country and the immediate need for actions. There is little doubt that the close geographic proximity to the world's major producer of illegal opiates, resulting in their unprecedented availability and affordability for non-medical use, presents significant challenges to the public drug policy development and implementation in Tajikistan. However, while existing Tajik drug control policies and strategies suggest that drug enforcement may continue to remain as a key focus for the country's overall response to the drug problem, reducing demand for illegal drugs and building effective public health and human rights-based systems of interventions that are adequate and responsive to the needs of substance using populations should be viewed as a top priority both for the Tajik government and international development partners. In short- and mid-term perspectives, this will require an increased commitment from national and international stakeholders and a shift of some financial resources from law enforcement to public health.

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