

**Bio-Behavioral HIV Survey among Injecting Drug Users in the
West Bank, 2013**

- Technical Report -

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Executive Summary

A bio-behavioral HIV survey among injecting drug users (IDUs) was carried out in October 2013 in Ramallah, Hebron, and Bethlehem governorates using time location sampling (TLS) methodology. The study aimed to assess the prevalence of HIV, HBV, and HCV, as well as to analyze the patterns and correlates of HIV-relevant risk-taking behaviors.

The study recruited 288 IDUs: 105 in Ramallah, 100 in Hebron, and 83 in Bethlehem. Only one of the surveyed IDUs was female. Age range in the sample was 16-64, with the mean age of 39.2 (SD = 11.11; median age = 41). A majority of participants had only primary education or less (69.0%) and were married (59.7%). Only a quarter of the sample reported a full or part-time employment (26.2%).

No HIV cases were found in the study. Nineteen participants (6.6%) tested positive for hepatitis B surface antigen, while 117 participants (40.6%) tested positive for HCV.

A small minority of participants (14.7%) answered correctly to all five standardized HIV knowledge questions (UNAIDS, 2013). However, when asked specifically about HIV risks related to injecting drug use, most participants seemed well-informed: 94.1% correctly stated that HIV can be transmitted by syringe sharing, while 88.9% knew that sharing a needle or syringe washed in water may result in getting infected with HIV. HIV knowledge was highest in Bethlehem and lowest in Hebron, but the differences were slight.

Less than one third of participants (27.8%) stated that they know where free and anonymous HIV testing can be obtained. A minority of sampled IDUs (33.1%) have ever tested for HIV, of whom a half reported having tested for HIV in the past 12 months. Every second participant who tested for HIV (49.4%) has received the result of his most recent test. No significant differences in HIV testing patterns were found among the governorates.

About one quarter of participants (23.3%) reported receiving sterile injecting equipment *and* free condoms from an NGO in the past 12 months. Obtaining sterile injection equipment was reported by 44.8% and free condoms by 29.3% of the sampled IDUs. Participants from Hebron were more likely than IDUs from Ramallah and Bethlehem to have received free condoms ($\chi^2 = 16.50, p < .001$) or free condoms and sterile injecting equipment ($\chi^2 = 8.07, p < .05$) in the past 12 months.

On average, the surveyed IDUs were almost 24 years of age ($M = 23.7, SD = 7.51$, median age = 22) when they first injected. During the last month, a majority of participants injected drugs 2-3 times a day (27.6%). Four or more injections per day were reported by additional 19.9% of participants. Heroin was the most popular drug in the sample (79.4%), followed by cocaine (7.8%). A substantial majority of participants stated that they used sterile equipment the last time they injected drugs (68.9%). Most of the IDUs who shared equipment the last time they injected, reported that they tried to disinfect the injecting equipment (85.5%)—most often with cold water (57.7%). There were no statistically significant differences among the three governorates in the proportion of IDUs who reported using sterile equipment the last time they injected drugs.

Most participants reported ever being treated for drug abuse (72.1%) and being imprisoned for illicit drug use (83.3%). Almost a half of the IDUs who reported incarceration continued to inject drugs while in prison (48.8%).

A vast majority of IDUs were sexually active in the 12 months preceding the study (80.5%). Of those, 15.5% reported more than one sexual partner in the same period. Less than a third of participants (29.2%) used a condom at most recent sexual intercourse. IDUs interviewed in Hebron were significantly more likely to have used condoms than IDUs from Bethlehem or Ramallah. Anal intercourse in the past 12 months was reported by 33.0% of IDUs. Condom use at anal intercourse was at best sporadic, as only 12.2% of the IDUs who

ever had anal intercourse stated that they used a condom at most recent anal intercourse. In addition, a minority of participants (15.1%) sold or bought sex, or exchanged it for drugs, in the past 12 months. Condom use at most recent commercial sexual activity was reported by 56.8% of IDUs.

Compared to an earlier probability-based BBS study carried out in the East Jerusalem Governorate (Štulhofer et al., 2012), the proportion of HCV-infected IDUs in this study fully corresponded to the previously reported figure. Only a few substantial differences were observed between the two studies, particularly in obtaining and using sterile injecting equipment, and the prevalence of HIV testing. Significantly more IDUs in the WB than East Jerusalem governorate sample reported receiving sterile injecting equipment from an outreach service. However they were less likely to use sterile equipment the last time they injected drugs. In regard to HIV testing, the proportion of IDUs who ever tested for HIV was twice as large in the 2010 study compared to this survey.

Overall, the study findings point to substantial levels of exposure to HIV infection risks and low levels of HIV knowledge and HIV testing among IDUs in the three WB governorates. Prevention efforts should be intensified, primarily the outreach provision of sterile injecting equipment and the promotion of free and anonymous HIV testing in local VCT centers. HIV testing should be coupled with providing comprehensive HIV information and increasing the awareness of personal HIV vulnerability among IDUs. It is also recommended that the policy of imprisonment of IDUs is re-examined.

Considering the observed levels of HIV-relevant risk-taking behaviors among the IDUs, a high-quality bio-behavioral HIV surveillance process in this vulnerable population remains extremely important (cf. Božičević et al., 2013), both as the mechanism that can provide early warning signs of a changing dynamics of HIV epidemic and as a tool for the assessment of current prevention and intervention efforts.

List of Abbreviations

BBS = Bio-behavioral surveillance

HCV = Hepatitis C virus

HIV = Human immunodeficiency virus

GF = Global Fund to Fight AIDS, Tuberculosis and Malaria

IDU = Injecting drug use

IDUs = Injecting drug users

MENA = Middle East and North Africa

MoH = Palestinian National Authority Ministry of Health

NAC = National AIDS Committee

NGO = Non-governmental organization

OPT = Occupied Palestinian Territory

SGH = Second generation HIV surveillance

STI = Sexually transmitted infections

TLS = Time location sampling

VCT = Voluntary counseling and testing

WB = West Bank, Palestine

Introduction

HIV prevalence in the Occupied Palestinian Territory (OPT) is reportedly low (Abu-Raddad et al., 2010; MoH, 2013), similarly to the situation in the region (MENA). However, a recent analysis suggested an accelerated pace in the number of newly documented HIV cases (Saba et al., 2013). According to the Palestinian Ministry of Health, the first HIV/AIDS cases in the OPT were diagnosed in 1988. By the end of 2012, 77 cumulative HIV/AIDS cases have been reported (MoH, 2013). As of February 2014, there were 82 registered cases of HIV in the West Bank (WB) and Gaza, with a great majority of HIV+ individuals supposedly infected through heterosexual contact.

According to the principles of the 2nd generation HIV surveillance, the focus in low prevalence settings is primarily on the most vulnerable groups (most-at-risk populations), such as injecting drug users (IDUs), female sex workers, men who have sex with men, and migrant workers. Available information on the HIV situation in the OPT suggests that injecting drug use (IDU) is of particular interest for HIV surveillance (MoH & UNODC, 2011; Palestinian Central Bureau of Statistics 2007; Štulhofer et al., 2012). Considering that IDU has been the primary driver of the HIV epidemic in many countries (Aceijas & Rhodes, 2007), an indicated increase in the prevalence of IDU in the OPT (MoH, UNODC, & AWRAD, 2011), together with anecdotal evidence of decreasing age at first IDU in the East Jerusalem governorate, is of substantial concern.

Funded by the Global Fund (GF) national grant, the Palestinian National AIDS Committee (NAC) and WHO Jerusalem office initiated an RDS bio-behavioral study among IDUs in Al Azariya (the East Jerusalem governorate), which was carried out in June 2010. The study, which sampled 199 IDUs, found no HIV+ cases but found a substantial proportion of HCV+ individuals (40%; Štulhofer et al., 2012). The present study, which focused on HIV

and HCV prevalence and relevant risky behaviors among IDUs in the WB, is a continuation of the 2nd generation HIV surveillance process in the OPT. It provides first systematic information about HIV situation and HIV-relevant risk-taking behaviors among IDUs in the governorates of Ramallah, Bethlehem, and Hebron.

Background

The Palestinian population of the WB is very young (37% of the population is younger than 15; the median age is 21) and growing at an approximate rate of 2.2%. In social and economic terms, the WB has experienced a serious economic downturn since 2000 and the beginning of the Second Intifada. In 2009, when economic revival began, the overall standard of living was still below the 2000 level; according to the UN data, the national unemployment rate in the OPT was >25% in 2008. However, in the 2009-2012 period, the situation somewhat improved and the proportion of unemployed individuals dropped by two percentage points in 2012. According to the CIA World Factbook estimate, about 18% of the population in the WB was living below poverty line in 2010.

At the end of 2012, 77 people were living with HIV/AIDS in the OPT, of whom 64 (83%) were diagnosed with AIDS (MoH, 2013). The Ministry of health statistics, however, do not include HIV and AIDS cases reported in East Jerusalem, which are notified to and followed up by Israeli hospitals.

Only a handful of HIV-related studies have been carried out in the OPT (Husseini & Abu-Rmeileh, 2007; MoH & UNODC, 2011; MoH, UNODC, & AWRAD, 2011; Štulhofer et al., 2012). None of the studies that have been carried out in the WB collected biological data or systematically analyzed the prevalence and correlates of HIV-related risk taking.

A study carried out in 2006 suggested that 20,000-45,000 individuals may be abusing drugs in the OPT (Palestinian Central Bureau of Statistics, 2007). According to a more recent situational assessment of illicit drug use in the OPT (MoH, UNODC, & AWRAD, 2011), in which 130 users from the WB participated, about one fifth of illicit drug users in the WB cities may be exclusively or primarily injecting drugs. Almost two thirds of the surveyed

IDUs (62%) reported sharing injecting equipment. Unfortunately, as the study used non-probability (snowball) sampling, the above findings can not be generalized.

HIV prevalence and the prevalence of HIV-related risks among IDUs in the neighboring countries—with an exception of Israel, where a recent national study carried out on a large-scale sample of Israeli IDUs reported HBV, HCV, and HIV prevalences of 3.5, 35.7, and 0.9%, respectively (Loebstein et al., 2008)—is similarly unknown. Although a substantial number of IDUs (3,000-89,000) were estimated to be living in Lebanon, Jordan, and Egypt (Aceijas et al., 2004; Mathers et al., 2008), data on HIV prevalence and the patterns of risky behaviors among IDUs in these countries is at best scarce (Abu-Raddad et al., 2010; Soliman et al., 2010; Mahfoud, 2010).

Study Aims

The goal of this study was to provide first systematic evidence on HIV vulnerability among IDUs in the WB. Specifically, the objectives were: 1) to determine the prevalence of HIV and HCV infection among IDUs; 2) to determine behavioral factors associated with HCV infection; 3) to assess knowledge about HIV; 4) to provide information on HIV-related sexual and non-sexual risk behaviors; and 5) to assess treatment seeking behaviors and HIV testing. The three cities/governorates in the WB were chosen for the study: Ramallah, Hebron, and Bethlehem. These areas were selected from the total of 11 governorates in the West Bank following the consensus reached among local experts (members of several civil society organizations working with IDUs and representatives of the Palestinian police) that heroin use is more prevalent in the central and southern parts of the WB than in the northern governorates. According to a 2012 report by the Palestinian Police Department of Drug Prevention, the number of illicit drug use cases identified by the police in the three selected

governorates amounted to almost 45% of the total number of drug abuse cases registered in the WB in 2012.²

Based on a mapping study carried out in May 2013, a bio-behavioral survey was carried out using TLS methodology during October 2013.

² Palestinian Police Department of Drug Prevention report 01/01/2012-31/12/2012, in Arabic. It should be noted that the report does not distinguish between injecting and non-injecting drug use.

Method

Time Location Sampling (TLS) Approach

TLS is probability-based sampling approach to hard-to-reach populations, suitable for HIV surveillance (e.g. Magnani et al., 2005; Fisher et al., 2007; Seman, 2010). It is a venue-based variant of cluster sampling where clusters are locations visited at a certain time. What makes TLS probability-based is a sampling frame composed of all the locations where a population of interest gathers *and* the times at which they gather at the listed locations. To build such sampling frame, a high-quality mapping study, which would collect information about all relevant locations and times, is needed. The quality of mapping study clearly determines the quality of the subsequent TLS study and the generalizability of the study findings depend on the scope and thoroughness of mapping.

According to the plan, based upon the available information and local experts' consensus, three cities/governorates in the WB were selected for this bio-behavioral study: Ramallah, Hebron, and Bethlehem. The three cities were identified as most problematic in terms of IDU and the related HIV risks in the WB. As respondent-driven sampling approach, used in the previous bio-behavioral study carried out in the East Jerusalem governorate, would be hampered by the geographical distance between the cities and by a relatively small estimated IDU population in each city, TLS was selected as the most appropriate and cost-effective approach.³

Sampling for the study was carried out by using a list of all identified locations and the related times of their use by IDUs, which was generated by systematic mapping (see the next section). Using an online random number generator, a number of time-location clusters to be visited by research teams were selected. Two-hour periods were allotted for field work at each

³ Due to the fact that TLS and RDS represent probability-based sampling methodologies, their findings are fully comparable.

selected location. The teams were instructed to count the total number of IDUs present at a given location and to interview and test as many IDUs as possible in 120 minutes. A precise schedule of locations to be visited at a certain hour was prepared for each team on daily basis.

Mapping Study

Following a selection and training of field workers, three research teams started collecting information about locations of interest and time of their use by IDUs in each of the three governorates. The field work continued until reaching saturation point, i.e. a point when all newly mentioned injecting sites/spots were already visited and their use by IDUs confirmed by the research team. In interviews with IDUs identified at different locations, the research teams established: (a) the locations of interest; (b) number of IDUs using each particular location; (c) whether a location is mostly used by the same group of IDUs (low mobility) or not (high mobility); (d) IDUs' willingness to participate in the planned bio-behavioral surveillance survey; (e) level of incentives that would motivate IDUs to participate; and (f) potential problems related to the logistics and safety during field work.

In total, 87 relevant locations were found (28 in Hebron, 26 in Bethlehem, and 33 in Ramallah), of which 54 (62%) were verified as currently being used by IDUs. Brief, on the spot, interviews were carried out with 167 IDUs. Most of the identified locations were characterized by low mobility, which suggested a relatively low risk of duplications in the future study. As the range of incentives mentioned was 100-300 NIS, a monetary incentive of 100 NIS per person (to compensate for participants' time) was chosen for the planned BBS study. Overall, the field work confirmed the feasibility of TLS methodology and suggested the use of rapid tests.

One month before the study launch, a brief mapping update was carried out in all three governorates. A number of changes were noted (four in Hebron, one in Bethlehem, and ten in

Ramallah), as some locations were abandoned by IDUs and several new locations, mostly in Ramallah, were identified. Fourteen locations in Ramallah, 25 in Bethlehem, and 23 in Hebron were included in the final sample. The locations varied in type, ranging from private houses and car repair shops to open spaces, such as fields, parks, and abandoned warehouses. The hours when IDUs were reported to gather at the locations ranged from 10 am to 8 pm. For safety reasons, research teams were instructed not to collect data after 6 pm.

Procedure and Participants

According to inclusion criteria, an individual was eligible to participate in the study if (s)he: (a) has injected drugs at least once in the past 30 days; (b) was 18-60 years of age at the time of the survey⁴; (c) spoke Arabic; (d) resided in the area of interest; and (e) gave informed consent for participation in behavioral and biological part of the study. Prospective participants were informed about the nature and requirements of the study (type of data collected, procedures, level of incentive, etc.) and asked for informed consent. After verbal consent was obtained, the participant was interviewed and then briefed about biological testing (pre-test counseling). Next, blood-based rapid HIV testing was carried out. An incentive of 100 NIS was given following HIV testing and post-test counseling⁵. Additional 30 NIS were given to participants who agreed to provide a sample of full blood to be tested for HCV. (Participants were informed that to learn about the result of their HCV testing they should visit the nearest VCT site.) All participants were given educational HIV and HCV brochures, free condoms, sterile injecting equipment, and the address of a nearest VCT site.

⁴ Five men recruited in the study were aged 61-64 years. Due to a relatively small sample size and the fact that maximum age criterion for inclusion was to a large extent arbitrary, we decided not to exclude these participants from the analyses.

⁵ 1 US\$ \approx 3.5 NIS (as of January 2014).

During field work, 80 duplications were identified. The total number of IDUs who were present at more than one chosen location at the time of surveying was, most likely, lower than the above figure.

Questionnaire and Measures

A shortened version of the questionnaire developed by the author of this report, which was translated in Arabic by an WHO Jerusalem officer and used in the East Jerusalem governorate 2010 BBS survey (Štulhofer et al., 2012), was used in this study. The brief questionnaire consisted of 34 questions and was divided into several sections (see Appendix B). In addition to sociodemographic characteristics, information on drug use, sexual behaviors (including engaging in commercial sex), utilization of IDU-specific services, prison experiences, HIV knowledge, HIV testing, and HIV risk self-assessment were collected. When assessing injecting drug use, risky sexual behaviors, HIV knowledge, and HIV testing standardized HIV monitoring indicators were used (UNAIDS, 2013). On average, the questionnaire took <10 minutes to complete.

Biological component

Determine TM (#48665k100) and *Unigold HIV* (# HIV3010003) rapid HIV-1/2 tests were used in the study. (The latter was to be applied in the case of a reactive result on the former test.) According to the National HIV Testing Guidelines, confirmatory testing, which was made possible by collecting full blood to be tested for HCV and HBV, was carried out using western blot.⁶ Third generation enzyme-linked immunosorbent assay (Elisa) DRG kits were employed for the detection of hepatitis B surface antigen (HbsAg; EIA-3892) and hepatitis C

⁶ Confirmatory testing was carried out in two cases, both from Hebron, in which rapid HIV testing produced inconclusive results. (Both cases were confirmed as HIV-negative.)

antibodies (HCVAb; EIA-3896) in blood serum. Testing was carried out in the Central Public Health Laboratory in Ramallah.

Statistical Analysis

No post-hoc data weighting was applied, as (1) all time-location clusters had equal selection probability and, importantly, (2) all IDUs present at each sampled location were surveyed (duplications excluded). IBM SPSS 21 statistical software was used for all statistical analysis. Chi-square and one-way ANOVA tests were used for bivariate analyses (assessment of differences by governorates), while multivariate logistic analysis was employed to explore the predictors and correlates of HCV infection, HIV testing, and sharing injecting equipment.

Ethical Considerations

All study procedures were carried out in accordance with ethical principles stipulated in the Declaration of Helsinki. Informed consent was asked for both (behavioral and biological) parts of the study. To protect participants' anonymity, no identifiers were collected at any point; prearranged codes were used to link behavioral and biological data. Following participant's verbal consent, a consent form testifying that informed consent was given was signed by an interviewer. Interviews were conducted in privacy, to ensure confidentiality. All study procedures were approved by the Palestinian National AIDS Committee.

Results

Sociodemographic Characteristics of the Sample

The study recruited 288 IDUs (105 in Ramallah, 100 in Hebron, and 83 in Bethlehem), including one female participant.⁷ Age range in the sample was 16-64, with the mean age of 39.2 (SD = 11.11, median = 41). A majority of participants have never attended a secondary school (69.0%). Only seven IDUs reported some college education. Most participants were married (59.7%), but a substantial minority 27.8% reported being single. No income was reported by 24.1% of participants. Another quarter of the sample reported a full of part-time employment (26.2%), while the rest of IDUs mentioned family support (10.8%), begging or stealing (28.0%), selling drugs (4.2%), etc. There were significant differences in employment status by governorate ($\chi^2 = 67.08, p < .001$), with most IDUs who reported no income living in Bethlehem.

HIV, HBV, HCV Prevalence and HIV Risk Self-Assessment

No HIV+ cases were found in this study. Nineteen participants (6.6%), a majority of them (n = 9) from Ramallah, tested positive for hepatitis B surface antigen, while 117 participants (40.6%) tested positive for hepatitis C. The highest HCV prevalence was found in Ramallah, where 47.6% of IDUs tested positive. However, the differences in the proportion of HCV+ individuals among the three governorates did not reach statistical significance.

Over a third of the surveyed IDUs claimed that they not exposed to the risk of HIV infection (36.2%). Being exposed to moderate or high HIV risks was reported by 16.0% and 32.6 of participants, respectively (Table 1). IDUs from Ramallah were significantly less likely to assess the HIV risks they are exposed to as high than IDUs from Hebron or Bethlehem (χ^2

⁷ The female IDU was surveyed in Bethlehem.

= 50.92, $p < .001$). Notably, there was no significant association between the frequency of injecting drugs in the past month and HIV risk self-assessment.

TABLE 1 – *Core biological and behavioral indicators of HIV-related risks by governorate*

	<i>Total n/N (%)</i>	<i>Hebron (%)</i>	<i>Bethlehem (%)</i>	<i>Ramallah (%)</i>
HIV	0/288	/	/	/
HCV	117/288 (40.6)	39.0	33.7	47.6
HBV	19/288 (6.6)	4.0	7.2	8.6
Used sterile injecting equipment at last injection	193/280 (68.9)	71.7	74.1	62.0
Received sterile equipment in the past 12 months	128/286 (44.8)	51.0	43.2	40.0
More than one sexual partner in the past 12 months	97/277 (35.0)	35.9	47.0	24.5
Used a condom at most recent sexual intercourse	76/260 (29.2)	38.8	19.5	29.0
Received free condoms in the past 12 months	79/270 (29.3)	43.6	27.3	17.2
Anal intercourse in the past 12 months	86/261 (33.0)	31.8	44.3	24.5
Sold or both sex in the last 12 months*	40/265 (15.1)	20.0	6.1	18.4
Correctly identifies ways of preventing HIV transmission and rejects major misconceptions about HIV transmission**	41/279 (14.7)	5.2	31.6	10.7
Ever been treated for drug abuse	207/287 (72.1)	70.0	81.7	67.6
Ever been to prison for drug abuse	240/288 (83.3)	86.0	74.7	87.6
Ever injected in prison	117/240 (48.8)	57.0	27.4	55.4
Knows where to go for anonymous and free HIV testing	79/284 (27.8)	31.0	33.3	20.4
Ever tested for HIV	92/278 (33.1)	37.0	32.5	29.7
Knows the result of his/her the most recent	43/87 (49.4)	48.6	50.0	50.0

HIV test				
Self-assessed HIV risk	102/282 (36.2)	23.0	21.0	61.4
No risk	43/282 (15.2)	12.0	21.0	13.9
Low risk	45/282 (15.6)	18.0	19.8	10.9
Moderate risk	92/282 (32.6)	47.0	38.3	13.9
High risk				

* Or exchanged it for drugs

** Provided correct answers to all five UNGASS indicators of HIV knowledge

HIV-Related Knowledge, HIV testing, and Utilization of Services

Only 41 participants (14.7%) answered correctly to all five standardized HIV knowledge questions (UNAIDS, 2013). Another 39 participants (14.0%) provided correct answers to four and 82 participants (29.4%) to three questions. However, when asked specifically about HIV risks related to injecting drug use, most participants seemed to be well-informed: 94.1% correctly stated that HIV can be transmitted by syringe sharing, while 88.9% knew that sharing a needle or syringe washed in water may result in getting infected with HIV. HIV-related knowledge was highest in Bethlehem and lowest in Hebron ($F = 4.56, p < .05$), but the differences were slight.

Less than one third of participants (27.8%) stated that they know where free and anonymous HIV testing can be obtained. A minority of the sampled IDUs (33.1%) have ever tested for HIV, of whom a half reported having tested in the past 12 months. About a half of participants who ever tested for HIV (49.4%) received the result of their most recent test. No significant differences in HIV testing were found among the governorates.

About one quarter of participants (23.3%) reported receiving sterile injecting equipment *and* free condoms from an NGO in the past 12 months. Obtaining sterile injection equipment was reported by 44.8% and free condoms by 29.3% of the sampled IDUs. Compared to IDUs from the two other governorates, participants from Hebron were

significantly more likely to have received either free condoms ($\chi^2 = 16.50, p < .001$) or free condoms and sterile injecting equipment ($\chi^2 = 8.07, p < .05$) in the past 12 months.

Patterns of Injecting Drug Use

On average, the surveyed IDUs were almost 24 years of age ($M = 23.7, SD = 7.51, Median = 22$) when they first injected. During the last month, a majority of participants injected drugs 2-3 times a day (27.6%). Four or more injections per day were reported by additional 19.9% of the surveyed IDUs. Heroin was the most popular drug in the sample (79.4%), followed by cocaine (7.8%). Both heroin and cocaine was used by 11.7% of participants.

A majority of IDUs stated that they used sterile equipment the last time they injected drugs (68.9%). The figure is almost identical to the sample prevalence (but not the estimated population prevalence) observed in the 2010 East Jerusalem Governorate surveillance study (68.8%; Štulhofer et al., 2012: 674). Most of the IDUs who shared equipment the last time they injected, reported that they tried to disinfect it (85.5%). Cleaning syringes with cold water was the most often mentioned method (57.7%). A small minority of participants used boiling water (5.1%). One participant reported using bleach, while three mentioned alcohol.

There were no statistically significant differences among the three governorates in the proportion of IDUs who reported using sterile equipment the last time they injected drugs ($p > .16$).

Treatment and Imprisonment

Most participants sampled in this study reported being treated for drug abuse (72.1%) and being imprisoned for illicit drug use (83.3%). IDUs interviewed in Bethlehem were less likely

to have been imprisoned than participants from Hebron or Ramallah ($\chi^2 = 6.60, p < .05$). Almost a half of ever incarcerated IDUs (48.8%) reported injecting drugs while in prison.⁸

Sexual Risk Taking

A vast majority of IDUs were sexually active in the past 12 months (80.5%). Slightly over a third of sexually active participants reported two or more sexual partners in the same period (35.0%); on average, 2.4 sexual partners (SD = 3.50) were reported. Less than a third of participants (29.2%) used a condom at most recent sexual intercourse. Interestingly, only 39.6% of the participants who reported two or more sexual partners in the past 12 months used a condom at most recent sexual intercourse—in comparison to 22.5% of participants with a single sexual partner. IDUs interviewed in Hebron were more likely to have used condoms than participants from either Bethlehem or Ramallah ($\chi^2 = 7.53, p < .05$).

Anal intercourse in the past 12 months was reported by 33.0% of IDUs. (The prevalence of anal intercourse was significantly higher in Bethlehem than Ramallah or Hebron ($\chi^2 = 7.72, p < .05$.) Condom use at anal intercourse was at best sporadic, as only 12.2% of the IDUs who ever had anal intercourse (n = 188) stated that they used a condom at most recent anal intercourse.

A minority of participants (15.1%) sold or bought sex, or exchanged it for drugs, in the past 12 months. (Commercial sex was the least prevalent in Bethlehem; $\chi^2 = 7.58, p < .05$.) Condom use at most recent commercial sexual activity was reported by 56.8% of the IDUs who reported such experience.

A Comparison to the 2010 East Jerusalem Governorate BBS Study Findings

⁸ This finding clearly contradicts some of the evidence provided by a recent study carried out among Palestinian prisoners (MoH & UNODC, 2011).

Table 2 offers a systematic comparison of the key findings from the two probability-based BBS studies carried out in the OPT. Of particular interest is evidence regarding the prevalence of HCV among IDUs in the WB and East Jerusalem governorate. An almost identical figure was obtained in each BBS survey. In general, only a few substantial differences were observed, particularly in obtaining and using sterile injecting equipment, and the prevalence of HIV testing. Significantly more IDUs in the WB than in the East Jerusalem study reported receiving sterile injecting equipment from an outreach service. However, they seemed to be less likely to use sterile equipment the last time they injected drugs. (A similar difference, although of a much smaller magnitude, was found in the context of condom use, related to having received free condoms in the past 12 months.) In terms of HIV testing, the proportion of IDUs who ever tested for HIV was twice as large in the 2010 study compared to this study.

TABLE 2 – Systematic Comparison of the 2010 and 2013 BBS Studies’ Key Findings

	<i>2013 BBS Study in the three WB governorates (%)</i>	<i>2010 BBS Study in East Jerusalem Governorate (%)*</i>
HCV	40.6	40.3
HBV	6.6	0.6
Used sterile injecting equipment at last injection	68.9	90.4
Received sterile equipment in the past 12 months	44.8	22.8
More than one sexual partner in the past 12 months	35.0	29.2
Used a condom at most recent sexual intercourse	29.2	34.2
Received free condoms in the past 12 months	29.3	17.6
Anal intercourse in the past 12 months	33.0	24.6
Sold or both sex in the last 12 months**	15.1	24.8
Correctly identifies ways of preventing HIV transmission and	14.7	17.4

rejects major misconceptions about HIV transmission ^{***}		
Ever been treated for drug abuse	72.1	85.4
Ever been to prison for drug abuse	83.3	93.4
Ever injected in prison	48.8	29.2
Knows where to go for anonymous and free HIV testing	27.8	34.0
Ever tested for HIV	33.1	66.3
Knows the result of his/her the most recent HIV test	49.4	57.5

* RDS-specific estimated population proportions are reported (cf. Štulhofer et al., 2012)

** Or exchanged it for drugs

*** Provided correct answers to all five UNGASS indicators of HIV knowledge

Correlates of HIV Risk Taking: Multivariate Assessment

Three multivariate logistic regressions were carried out to analyze predictors and correlates of: (a) using sterile equipment the last time a drug was injected, (b) HIV testing, and (c) being infected with HCV. As only two sociodemographic characteristics were significantly associated with one or more dependent variables at bivariate level, multivariate models included participant's age and education as controls.

As shown in Table 3, having used sterile equipment at last drug injection was significantly associated only with the frequency of drug use. The association with education bordered on significance (OR = 1.85, $p < .06$). Unlike education, which increased the odds of using sterile equipment, a more frequent daily drug use significantly decreased the odds of using sterile injecting equipment (OR = .56, $p < .05$).

TABLE 3 – Correlates of sharing injecting equipment in the past week

n=258	OR	95% CI
Age (0 = up to 40; 1 = 41 or older)	.93	.52-1.64
Education (0=no education or only primary; 1=secondary or higher)	1.85	.99-3.47
Frequency of injecting drugs in the past month (0=up to once a day; 1=two or more times per day)	.56*	.32-.99

Used NGO services in the past year	1.67	.95-2.91
Ever tested for HIV	1.21	.64-2.26
HIV knowledge (0=median or lower score; 1=higher than median score)	1.77	.92-3.37

*p<.05

Ever tested for HIV was statistically significantly related to the following independent variables: participant's age, utilization of NGO services, frequency of injecting drugs, and HIV knowledge (Table 4). In addition, the association between the outcome and participant's education again bordered on significance (OR = 1.80, p < .06). Older participants (OR = 2.51, p < .01), those who reported using dedicated NGO services in the past year (OR = 1.88, p < .05), participants who had better HIV knowledge (OR = 1.95, p < .05), and those who injected drugs more frequently (OR = 2.50, p < .01) were more likely ever to have tested for HIV.

TABLE 4 – Correlates of HIV testing

n=267	OR	95% CI
Age (0 = up to 40; 1 = 41 or older)	2.51**	1.40-4.50
Education (0=no education or only primary; 1=secondary or higher)	1.80	.99-3.28
Frequency of injecting drugs in the past month (0=up to once a day; 1=two or more times per day)	2.50**	1.41-4.44
Used NGO services in the past year	1.88*	1.08-3.28
HIV knowledge (0=median or lower score; 1=higher than median score)	1.95*	1.08-3.52

*p<.05; ** p<.01

Predictors and correlates of HCV infection were assessed in the final regression analysis. As findings presented in Table 5 show, HCV infection was significantly associated with three independent variables: participant's age, HIV testing, and frequency of injecting drugs. As expected, older participants (with a longer drug injecting carrier) were about four

times more likely to be infected than younger IDUs (OR = 4.07, $p < .001$). In addition, the odds of being HCV+ were over three times higher (OR = 3.23, $p < .001$) among the IDUs who reported injecting drugs two or more times a day in comparison to those who injected drugs less frequently. Similarly, the odds of being infected with HCV were over 2.5 times higher (OR = 2.75, $p < .01$) among those who have ever tested for HIV than among those who have never tested.

TABLE 5 – Correlates of HCV infection

n=267	OR	95% CI
Age (0 = up to 40; 1 = 41 or older)	4.07**	2.25-7.35
Education (0=no education or only primary; 1=secondary or higher)	1.04	.56-1.94
Frequency of injecting drugs in the past month (0=up to once a day; 1=two or more times per day)	3.23**	1.81-5.78
Used NGO services in the past year	.82	.46-1.47
Ever tested for HIV	2.75*	1.49-5.07
HIV knowledge (0=median or lower score; 1=higher than median score)	.86	.45-1.64

* $p < .01$; ** $p < .001$

Discussion

Injecting drug use has fueled the HIV epidemic in a number of countries world-wide (Aceijas & Rhodes, 2007; Reintjes & Wiesing, 2007; Jarlais, 2009). In addition to the direct risks of HIV transmission through sharing injecting equipment, IDUs' vulnerability is strongly associated with the characteristics of their social environment (Rhodes et al., 2005; Strathdee, 2010; Degenhardt et al., 2010), which include poverty, health problems, inaccessibility of health services, violence, and a lack of social support. Health-protective behaviors and long-term planning are unlikely characteristics of IDUs.

Although no HIV-positive cases were found in this BBS study, substantial levels of HIV-relevant risks were observed in IDUs in Ramallah, Hebron, and Bethlehem. Over 40% of participants were infected with HCV, the standard proxy for HIV vulnerability in low-level epidemic settings. A recent Lebanese BBS survey carried out on a smaller sample of IDUs found a similar HCV prevalence (51%; Mahfoud et al., 2010). Furthermore, a sizeable minority of participants in this study reported sharing injecting equipment in the week preceding the survey (31.1%). Considering that the most often reported method of syringe cleaning was washing it with cold water, the observed injecting equipment sharing reflects non-negligible levels of HIV risks.

The evidence on sexual behaviors points in the same direction. The reported prevalence of condom use at most recent sexual intercourse was low (suggesting a potential for infection bridging; cf. Abu-Raddad et al., 2010), including the IDUs who reported multiple sexual partners. In addition, a sizeable minority of participants reported the practice of mostly unprotected anal intercourse, as well as of selling or buying sex.

There were also a couple of encouraging findings. A vast majority of participants had at least a basic understanding of the association between IDU and HIV infection. More

importantly, the existing outreach services were found to likely have an impact, particularly in encouraging HIV testing. In this regard, our findings suggest that outreach coverage is currently highest in the Hebron governorate.

It is important to note that this study did not explore the socio-cultural context of IDU in the WB, even though the dynamics of IDU are not independent from the persisting economic hardship and other security-related and culture-specific factors. Several other study limitations need to be briefly discussed. As already mentioned, TLS studies are as good as the mapping study that their sample frame was based upon. In this study, potential omissions of relevant locations was likely minimized by a second round of mapping, undertaken to update the list of time-locations clusters prior to the study launch.

A typical problem with TLS methodology is duplications, i.e. participants recruited in the study more than once. Although the problem is usually substantially reduced by using a single research team, this was not an option in this study as time constraints required employing a team per governorate. Therefore, the teams were carefully trained to minimize duplications, which resulted in 80 participants being refused a repeated participation.

Some statistical analyses presented in this report, particularly when split by governorate, lack power. The standard formula used for generating target sample size was of little help in this study, because the number of IDUs in each of the three governorates was estimated to be in the 100-200 range. (Similar problem was encountered in the 2010 BBS study.) Although the samples were relatively small, how well they may represent the population of IDUs in Ramallah, Behtlehem, and Hebron? Keeping in mind the sociodemographic heterogeneity of the study sample, the collected data are likely representative of male IDUs—with an exception of financially well-off individuals. A failure to recruit female IDU has been previously reported (see MoH, UNODC, & AWRAD, 2011;

Štulhofer et al., 2012). Female IDUs seem to be few and often disconnected from larger IDU networks due to a strict family control characteristic for traditional societies.

Recommendations

(1) Upgrade outreach services

- The provision of sterile injecting equipment and free condoms needs to be scaled up, particularly in Ramallah and Bethlehem governorates.

(2) Increase the number of IDUs testing for HIV

- Information about anonymous and free HIV testing at local VCT centers should be systematically distributed in the population using outreach work, peer-driven interventions, etc.⁹ Information dissemination should also aim to increase the awareness of personal exposure to HIV risks.
- As a part of a wider campaign to scale up HIV testing among vulnerable populations in the OPT, incentives for should be offered to IDUs to test for HIV.

(3) Re-consider legal procedures

- As repeatedly demonstrated, incarceration can not break the habit of drug abuse. In fact, a high proportion of Palestinian IDUs were found—both in the 2010 BBS survey and this study—to continue injecting drugs while in prison. If the long-term goal is to reduce IDU, a more comprehensive treatment policy and a re-examination of the current legal measures will be needed.

(4) Continue bio-behavioral HIV surveillance among IDUs

- BBS surveys among IDUs in the governorates of East Jerusalem, Ramallah, Bethlehem, and Hebron should be continued at regular intervals (every 2-3 years) using comparable high-quality methodology based on probability sampling. A rapid IDU assessment and mapping study should be carried out in the north of WB to probe the situation in a more systematic manner.

⁹ Overall, HIV testing among most-at-risk populations in the whole region needs substantial scaling up (see Hermez et al., 2010).

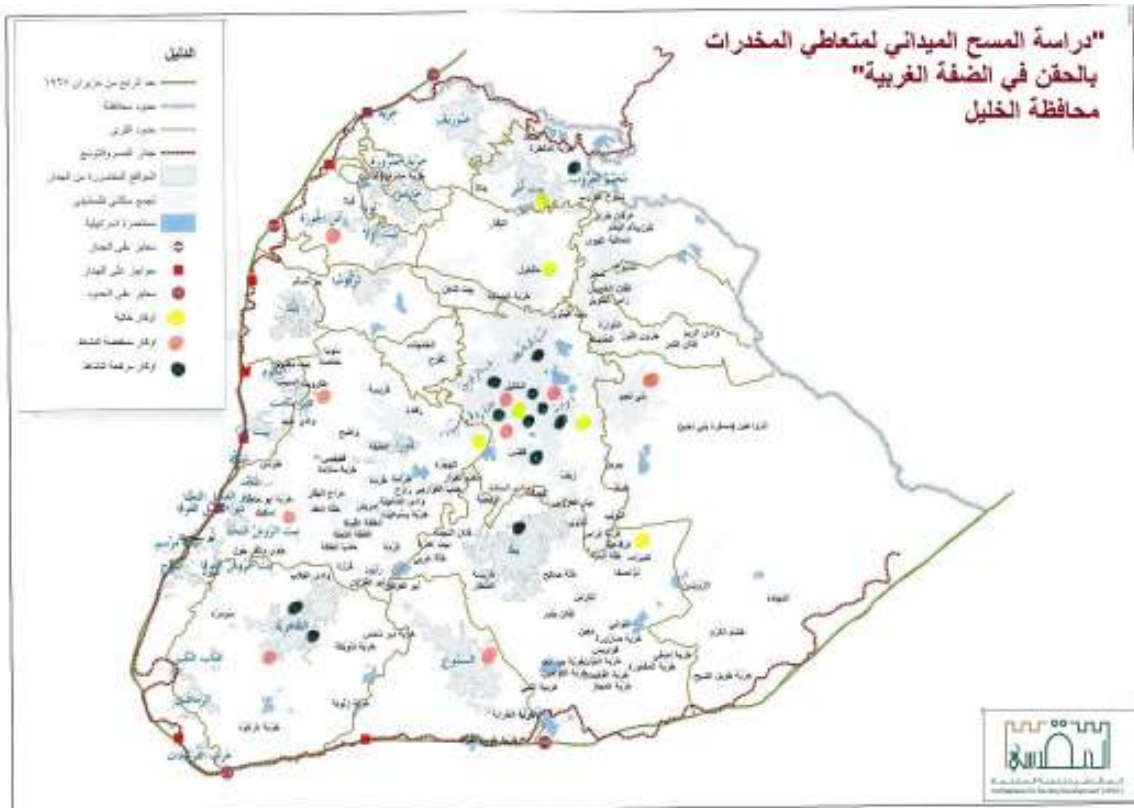
- Small-scale qualitative studies should be carried out by local anthropologists and sociologists, familiar with the dominant cultural codes, to explore the phenomenology of IDU risk taking in more detail. Of particular interest would be to explore the links between drug use and commercial sexual activity, possibly including same-sex sexual contacts, as well as to analyze symbolic meanings of injecting equipment sharing—likely moderated by the characteristics of local IDU social networks (cf. Friedman et al., 2006).

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مركز المقدسي للتوعية والإرشاد / منظمة الصحة العالمية

APPENDIX B – Study Questionnaire

TLS study among injecting drug users in the West Bank, 2013

CITY: _____
LOCATION: _____
TIME (2 HRS PERIOD): _____
TOTAL NUMBER OF IDUs PRESENT DURING THE VISIT: _____
NUMBER OF IDUs WHO ALREADY PARTICIPATED IN THE STUDY (AT ANOTHER LOCATION): _____

DEMOGRAPHIC CHARACTERISTICS

First, I would like to ask you some questions regarding your life in general.

01. Which year you were born? _____

02. Sex? (*do not read the answers*)

1. Male
2. Female

03. What is the **highest level** of education you completed?

1. No formal education
2. Some primary
3. Primary
4. Some secondary
5. Secondary
6. Some college
7. College/university

04. Currently, are you:

1. Married
2. Divorced
3. Widowed
4. In a steady relationship
5. Single

05. What was the main source of your income during the last month?

1. No income in the last month
2. Permanent employment

3. Temporary job/part-time job
4. Family support
5. Selling drugs
6. Stealing and/or begging
7. Something else (what?) _____

DRUG USE

Now, I would like to ask you some questions about drug use.

06. How old were you when you started injecting drugs? _____ years

07. How frequently you injected the drug during the last month?

1. Once
2. 2-3 times
3. Once a week
4. 2-3 times a week
5. 4-6 times a week
6. Once a day
7. 2-3 times a day
8. 4 or more times a day

08. Which drug did you inject **most often in the last month**? _____

09. The last time (most recently) you injected drugs, did you use a sterile needle and syringe (i.e. the needle and syringe that no one has used before you)?

1. Yes
2. No

!	If the answer was „YES“ (1), skip the following two questions and go to question number 12 .
---	---

10. The last time you shared injecting equipment, have you tried in any way to clean or disinfect the needle/syringe you used?

1. Yes
2. No

11. How did you try to clean the needle/syringe? (DO NOT READ ANSWERS; MULTIPLE ANSWERS ARE POSSIBLE)

1. With cold water
2. With warm water
3. With hot water
4. With boiling water
5. With soap or detergent
6. With bleach
7. With alcohol
8. Other (HOW?) _____

12. In the past 12 months, have you been given sterile needles and syringes by an outreach worker, peer educator, NGO worker, or from a needle exchange programme?

1. Yes
2. No

TREATMENT FOR DRUG ADDICTION AND EXPERIENCE WITH THE POLICE AND PRISON

13. Have you ever undertaken treatment to reduce or quit using drugs?

1. Yes
2. No

14. Have you ever been to prison because of your drug use?

1. Yes
2. No

!	If NO, skip the next question and proceed to the SEXUAL PRACTICES section
---	--

15. Have you **injected drugs** during your prison time?

1. Yes
2. No

SEXUAL PRACTICES

Now, I would like to ask you some questions about your sexual behavior.

16. With how many different people did you have sexual intercourse in the last 12 months?

with _____ individuals

17. Have you used condom the last time you had sexual intercourse?

1. Yes
2. No

18. Did you have anal intercourse in the last 12 months?

1. Yes
2. No

19. Have you used condom the last time you had anal intercourse?

1. Yes
2. No

20. In the last 12 months, did you pay someone for sex or gave them goods or drugs to have sex with you?

1. Yes
2. No

!

If NO, skip the next question and go to the **SEXUALLY TRANSMITTED INFECTIONS AND HIV TESTING** section

21. Did you use a condom the last time you had sex that you paid for (with money or drugs)?

1. Yes
2. No

22. In the last 12 months, have you been given free condoms through an NGO, outreach service, drop-in centre or sexual health clinic?

1. Yes
2. No

HIV TESTING

I would like to ask you a few questions about HIV/AIDS.

23. Do you know where you can go if you wish to receive a free and anonymous HIV test?

1. Yes
2. No

24. Have you ever tested for HIV?

1. Yes
2. No

!

If NO, go to the next section (**HIV KNOWLEDGE**)

25. Have you been tested for HIV in the last 12 months?

1. Yes
2. No

26. I don't want to know the results, but did you receive the results of your most recent (if there were more than one) HIV test?

1. Yes
2. No

HIV KNOWLEDGE

Finally, I would like to ask you a few questions about transmission of HIV.

27. Thinking about the risk of getting infected with HIV, how much do you think you are exposed to this risk?

1. I am not exposed to any risk
2. The risk is small
3. The risk is moderate
4. The risk is substantial

28. Can having sex only with only and faithful uninfected partner reduce the risk of HIV transmission?

1. Yes
2. No
3. I don't know

29. Can using condoms reduce the risk of HIV transmission?

1. Yes
2. No
3. I don't know

30. Can a healthy-looking person be infected with HIV?

1. Yes
2. No
3. I don't know

31. Can a person get HIV by using the same toilet with a person infected with HIV?

1. Yes
2. No
3. I don't know

32. Can a person get HIV by sharing a meal with someone who is infected?

1. Yes
2. No
3. I don't know

33. Can a person get HIV by sharing an already used needle or syringe which was washed in water before the next use?

1. Yes
2. No
3. I don't know

34. Can HIV be transmitted by using a needle and/or syringe already used by somebody else?

1. Yes
2. No
3. I don't know

Thank you very much for your time and participation!

APPENDIX C – Frequency Distribution of the Study Indicators

TOWN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hebron	100	34.7	34.7	34.7
	Bethlehem	83	28.8	28.8	63.5
	Ramallah	105	36.5	36.5	100.0
	Total	288	100.0	100.0	

AGE - statistics

N	Valid	287
	Missing	1
Mean		39.2300
Median		41.0000
Std. Deviation		11.11397
Minimum		16.00
Maximum		64.00

AGE_4GRP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-26	50	17.4	17.4	17.4
	27-37	69	24.0	24.0	41.5
	38-48	101	35.1	35.2	76.7
	49 and older	67	23.3	23.3	100.0
	Total	287	99.7	100.0	
Missing	System	1	.3		
Total		288	100.0		

HIV test (first rapid)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	negative	286	99.3	99.3	99.3
	reactive	2	.7	.7	100.0
	Total	288	100.0	100.0	

HCV test

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	negative	171	59.4	59.4	59.4
	positive	117	40.6	40.6	100.0
	Total	288	100.0	100.0	

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	286	99.3	99.7	99.7
	female	1	.3	.3	100.0
	Total	287	99.7	100.0	
Missing	System	1	.3		
Total		288	100.0		

formal education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no formal educ	21	7.3	7.3	7.3
	some primary	101	35.1	35.2	42.5
	primary	76	26.4	26.5	69.0
	some secondary	37	12.8	12.9	81.9
	secondary	45	15.6	15.7	97.6
	some college	6	2.1	2.1	99.7
	college	1	.3	.3	100.0
	Total	287	99.7	100.0	
Missing	System	1	.3		
Total		288	100.0		

marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	married	172	59.7	59.7	59.7
	divorced	28	9.7	9.7	69.4
	widowed	4	1.4	1.4	70.8
	in a relationship	4	1.4	1.4	72.2
	single	80	27.8	27.8	100.0
	Total	288	100.0	100.0	

employment or being supported

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no income	69	24.0	24.1	24.1
	permanent employment	12	4.2	4.2	28.3
	temporary job	63	21.9	22.0	50.3
	family support	31	10.8	10.8	61.2
	selling drugs	12	4.2	4.2	65.4
	begging or stealing	80	27.8	28.0	93.4
	something else	19	6.6	6.6	100.0
	Total	286	99.3	100.0	
Missing	System	2	.7		
Total		288	100.0		

Age at first drug injection

N	Valid	279
	Missing	9
Mean		23.69
Median		22.00
Std. Deviation		7.505
Minimum		13
Maximum		50

freq of drug use in the past month

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	once	37	12.8	12.9	12.9
	2-3 times	27	9.4	9.4	22.4
	once a week	7	2.4	2.4	24.8
	2-3 times a week	24	8.3	8.4	33.2
	4-6 times a week	21	7.3	7.3	40.6
	daily	34	11.8	11.9	52.4
	2-3 times a day	79	27.4	27.6	80.1
	4 or more times a day	57	19.8	19.9	100.0
	Total	286	99.3	100.0	
Missing	System	2	.7		
Total		288	100.0		

most often injected drug (in the past month)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	heroin	224	77.8	79.4	79.4
	cocaine	22	7.6	7.8	87.2
	heroine and cocaine	33	11.5	11.7	98.9
	other	3	1.0	1.1	100.0
	Total	282	97.9	100.0	
Missing	System	6	2.1		
Total		288	100.0		

sterile equipment at last injection

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	193	67.0	68.9	68.9
	no	87	30.2	31.1	100.0
	Total	280	97.2	100.0	
Missing	System	8	2.8		
Total		288	100.0		

tried to disinfect the equipment (last time shared)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	71	24.7	85.5	85.5
	no	12	4.2	14.5	100.0
	Total	83	28.8	100.0	
Missing	System	205	71.2		
Total		288	100.0		

disinfected with cold water

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not used	33	11.5	42.3	42.3
	used	45	15.6	57.7	100.0
	Total	78	27.1	100.0	
Missing	System	210	72.9		
Total		288	100.0		

warm water

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not used	73	25.3	93.6	93.6
	used	5	1.7	6.4	100.0
	Total	78	27.1	100.0	
Missing	System	210	72.9		
Total		288	100.0		

hot water

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not used	72	25.0	92.3	92.3
	used	6	2.1	7.7	100.0
	Total	78	27.1	100.0	
Missing	System	210	72.9		
Total		288	100.0		

boiling water

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not used	74	25.7	94.9	94.9
	used	4	1.4	5.1	100.0
	Total	78	27.1	100.0	
Missing	System	210	72.9		
Total		288	100.0		

soap/detergent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not used	78	27.1	100.0	100.0
Missing	System	210	72.9		
Total		288	100.0		

bleech

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not used	77	26.7	98.7	98.7
	used	1	.3	1.3	100.0
	Total	78	27.1	100.0	
Missing	System	210	72.9		
Total		288	100.0		

alcohol

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not used	75	26.0	96.2	96.2
	used	3	1.0	3.8	100.0
	Total	78	27.1	100.0	
Missing	System	210	72.9		
Total		288	100.0		

in the past 12 months, sterile equipement recived from...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	128	44.4	44.8	44.8
	no	158	54.9	55.2	100.0
	Total	286	99.3	100.0	
Missing	System	2	.7		
Total		288	100.0		

ever being treated for drug abuse

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	207	71.9	72.1	72.1
	no	80	27.8	27.9	100.0
	Total	287	99.7	100.0	
Missing	System	1	.3		
Total		288	100.0		

ever been in prison because of drug abuse

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	240	83.3	83.3	83.3
no	48	16.7	16.7	100.0
Total	288	100.0	100.0	

injected drugs while in prison

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	117	40.6	48.8	48.8
no	123	42.7	51.3	100.0
Total	240	83.3	100.0	
Missing System	48	16.7		
Total	288	100.0		

no of sexual partners in the past 12 months

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	54	18.8	19.5	19.5
1	126	43.8	45.5	65.0
2	13	4.5	4.7	69.7
3	24	8.3	8.7	78.3
4	13	4.5	4.7	83.0
5	14	4.9	5.1	88.1
6	10	3.5	3.6	91.7
7	6	2.1	2.2	93.9
8	2	.7	.7	94.6
9	4	1.4	1.4	96.0
10	6	2.1	2.2	98.2
15	1	.3	.4	98.6
20	3	1.0	1.1	99.6
30	1	.3	.4	100.0
Total	277	96.2	100.0	
Missing System	11	3.8		
Total	288	100.0		

condom used at most recent intercourse

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	76	26.4	29.2	29.2
no	184	63.9	70.8	100.0
Total	260	90.3	100.0	
Missing System	28	9.7		
Total	288	100.0		

anal intercourse in the past 12 m

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	86	29.9	33.0	33.0
	no	175	60.8	67.0	100.0
	Total	261	90.6	100.0	
Missing	System	27	9.4		
Total		288	100.0		

condom used at most recent anal intercourse

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	23	8.0	12.2	12.2
	no	165	57.3	87.8	100.0
	Total	188	65.3	100.0	
Missing	System	100	34.7		
Total		288	100.0		

sold or bought sex in the past 12 m

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	40	13.9	15.1	15.1
	no	225	78.1	84.9	100.0
	Total	265	92.0	100.0	
Missing	System	23	8.0		
Total		288	100.0		

condom used at most recent commercial sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	21	7.3	56.8	56.8
	no	16	5.6	43.2	100.0
	Total	37	12.8	100.0	
Missing	System	251	87.2		
Total		288	100.0		

given free condoms in the past 12 m

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	79	27.4	29.3	29.3
	no	191	66.3	70.7	100.0
	Total	270	93.8	100.0	
Missing	System	18	6.3		
Total		288	100.0		

do you know where to go for HIV testing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	79	27.4	27.8	27.8
	no	205	71.2	72.2	100.0
	Total	284	98.6	100.0	
Missing	System	4	1.4		
Total		288	100.0		

ever tested for HIV

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	92	31.9	33.1	33.1
	no	186	64.6	66.9	100.0
	Total	278	96.5	100.0	
Missing	System	10	3.5		
Total		288	100.0		

tested for HIV in the past 12 m

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	45	15.6	50.0	50.0
	no	45	15.6	50.0	100.0
	Total	90	31.3	100.0	
Missing	System	198	68.8		
Total		288	100.0		

most recent HIV test's result received

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	43	14.9	49.4	49.4
	no	44	15.3	50.6	100.0
	Total	87	30.2	100.0	
Missing	System	201	69.8		
Total		288	100.0		

HIV risk self-assessment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no risk	102	35.4	36.2	36.2
	small risk	43	14.9	15.2	51.4
	moderate risk	45	15.6	16.0	67.4
	substantial risk	92	31.9	32.6	100.0
	Total	282	97.9	100.0	
Missing	System	6	2.1		
Total		288	100.0		

HIV know 1: only one partner

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect aswer/did not know	104	36.1	36.6	36.6
	correct answer	180	62.5	63.4	100.0
	Total	284	98.6	100.0	
Missing	System	4	1.4		
Total		288	100.0		

HIV know 2: condoms reduce risk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect aswer/did not know	78	27.1	27.3	27.3
	correct answer	208	72.2	72.7	100.0
	Total	286	99.3	100.0	
Missing	System	2	.7		
Total		288	100.0		

HIV know 3: healthy looking person

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect aswer/did not know	85	29.5	29.6	29.6
	correct answer	202	70.1	70.4	100.0
	Total	287	99.7	100.0	
Missing	System	1	.3		
Total		288	100.0		

HIV know 4: using the same toilet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect aswer/did not know	200	69.4	69.4	69.4
	correct answer	88	30.6	30.6	100.0
	Total	288	100.0	100.0	

HIV know 5: sharing meals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect aswer/did not know	182	63.2	63.6	63.6
	correct answer	104	36.1	36.4	100.0
	Total	286	99.3	100.0	
Missing	System	2	.7		
Total		288	100.0		

HIV know 6: sharing equipment that was washed before use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect aswer/did not know	32	11.1	11.1	11.1
	correct answer	256	88.9	88.9	100.0
	Total	288	100.0	100.0	

HIV know 7: sharing equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	incorrect aswer/did not know	17	5.9	5.9	5.9
	correct answer	271	94.1	94.1	100.0
	Total	288	100.0	100.0	

HIV knowledge scale (5 items; v28-v32)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	21	7.3	7.5	7.5
	1.00	40	13.9	14.3	21.9
	2.00	56	19.4	20.1	41.9
	3.00	82	28.5	29.4	71.3
	4.00	39	13.5	14.0	85.3
	5.00	41	14.2	14.7	100.0
	Total	279	96.9	100.0	
Missing	System	9	3.1		
Total		288	100.0		