Integrated Biological and Behavioral Surveillance (IBBS) Survey among People Who Inject Drugs (PWID) in Kathmandu Valley, 2015

Round VI

FINAL REPORT

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The IBBS Surveys are part of the National HIV Surveillance Plan, led by NCASC. The field work of the surveys was carried out by **Intrepid Nepal**, quality assurance by National Public Health Laboratory and with financial assistance from the Government of Nepal under the Pooled Fund mechanism.

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Acknowledgement

This survey, conducted in accordance with National Plan on HIV and STI Surveillance, aims to support evidence generation towards HIV, STI, Hepatitis B, Hepatitis C, knowledge, related risk behavior, and prevalence trends by way of Integrated Biological and Behavioral Surveillance (IBBS) survey. The survey was carried out by Intrepid Nepal Pvt, Ltd. (INPL) under the leadership of National Centre for AIDS and STD Control (NCASC). Financial support for this survey was through the Pooled Fund for Targeted Intervention (TI) Program.

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We are confident that the findings of this important survey will provide crucial evidence of the ground realities, and that the results will help in framing policies in order to fight HIV, STI, Hepatitis B and C to improve HIV-related responses and planning.

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Acronyms

AIDS	Acquired Immuno-Deficiency Syndrome
AMDA	Association of Medical Doctors of Asia
ARC	Addiction Recovering Center
BSS	Behavioral Surveillance Survey
CDC	Center for Disease Control
CI	Confidence Interval
CMs	Community Mobilizes
DIC	Drop-in-Centre
EQAS	External Quality Assurances Service
FHI	Family Health International (FHI 360)
FPAN	Family Planning Association of Nepal
FSW	Female Sex Worker
GARPR	Global AIDS Response Progress Reporting
GOs	Governmental Organizations
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HIV	Human Immuno-Deficiency Virus
HTC	HIV Testing and Counseling
IBBS	Integrated Biological and Behavioral Surveillance
IBBS	Integrated Biological and Behavioral Surveillance Survey
IC	Information Center
ID	Identification Number
IEC	Information, Education and Communication
KAP	Key Affected Population
LDSS	Low Dead Space Syringes
LT	Lab Technician
MARPs	Most at Risk Populations
MRGM	Mountain Hill Resource Management Group
MSM	Men who have Sex with Men
MSW	Male Sex Worker
NCASC	National Centre for AIDS and STD Control
NGO	Non-Governmental Organization
NHRC	Nepal Health Research Council
NPHL	National Public Health Laboratory

OE	Outreach Educator
OST	Opioid Substitution Therapy
PE	Peer Educator
PPS	Probability Proportional to Size
PWID	People Who Inject Drugs
RDS	Response Driven Sampling
RDSAT	Response Driven Sampling Analysis Tool
RN	Recovering Nepal
RNA	Ribonucleic Acid
RPR	Rapid Plasma Reagin
SACTS	STD/AIDS Counseling and Training Services
SI	Strategic Information
SIDC	Social Integrated Development Center
SITWG	Strategic Information Technical Working Group
SLC	School Leaving Certificate
SPSS	Statistical Package for the Social Sciences
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infection
TI	Targeted Intervention
TPHA	Treponema Pallidum Hem agglutination Assay
TPPA	Treponema Pallidum Particle Agglutination Assay
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNDP	United Nations Development Programme
USA	United State of America
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
YMC	Youth Mobilization Center

Executive Summary

Nepal has developed a comprehensive national surveillance plan for HIV and Sexually Transmitted Infection (STI) surveillances through a regular Integrated Biological and Behavioral Surveys (IBBS) among key population at higher risk of HIV transmission through The National Centre for AIDS and STD Control (NCASC). These surveillance surveys should help in assessing health risk behaviors, measuring prevalence of HIV and STI among key populations at higher risk and monitoring trends in the epidemic; ultimately assisting in planning in order to respond to the HIV and AIDS epidemic in the country.

The sixth round of the IBBS survey in Kathmandu valley among 340 males among People Who Inject Drugs (PWID) was conducted by NCASC with financial support from the TI Pooled Fund. The survey has primarily collected strategic information needed to analyze trends in risk behavior associated with HIV and STI. For the first time in the history of IBBS, the survey has introduced HCV and HBV testing to determine prevalence among PWIDs.

A Structured questionnaire was used to capture behavioral data, including information on STI/HIV and AIDS awareness, among the respondents. Survey centers with laboratory and clinic services were set up at Tilganga in Kathmandu. All respondents were examined for clinical symptoms for STI and blood samples were collected for the detection of HIV and syphilis infection (SI) including Hepatitis B and Hepatitis C. The survey participants were provided with treatment for STIs if/as and when clinical/observational diagnostics were positive. Trained counselors provided pre and post-test counseling, prior to blood draw and the distribution of test results for HIV and/or STIs respectively at the survey center.

Survey Methodology

A Cross Sectional Survey Designed with a sample size of 340 was determined. The respondent-driven sampling (RDS) method was adopted to recruit survey participants. In order to draw up a comparative analysis of the behavioral trends over the years, querying instruments utilized in previous rounds of IBBS surveys were intensively revised. Strict confidentiality was maintained throughout the survey. The respondents were provided a unique identification (ID) number. The same ID was unique across individual medical records, and blood specimens of the particular respondents. All respondents participated voluntarily and consensually in the study. Those who did not meet the survey criteria and unwilling to participate, were not included in the survey. The survey was conducted in accordance with ethical and human rights standards. Ethical approval was obtained from the Nepal Health Research Council (NHRC) prior to the commencement of the fieldwork.

Data analysis was done using the IBM® SPSS® Statistical Package and Respondent Driven Sampling Analysis Tool (RDSAT) software. Pull-in outlier option was used in RDSAT to eliminate extremely small and large outliers in network sizes. In order to maintain consistency with previous rounds of I, the RDSAT analysis for this survey used 5 percent pull-in outliers of network sizes.

Laboratory Methods

Syphilis was tested for by using the Rapid Plasma Regain (RPR) test card and confirmed by means of the Serodia Treponema Pallidum Particle Agglutination (TPPA)

test. Treponema Pallidum Particle Agglutination (TPPA)-positive and all samples with positive RPR were further tested for the titre dilution up to 1:8 ratio for active Syphilis.

HIV was detected through the use of 'Determine HIV 1/2 (Abbott Japan Co. Ltd.)' rapid test kits as a first test to detect antibodies against HIV. If the first test showed a negative result then no further tests were conducted. However, if the first test result was positive, the second test was performed using 'Uni-Gold (Trinity Biotech, Dublin, Ireland)' test kits. In cases of a tie between the first two tests, a third test was performed using 'Stat Pak HIV 1/2 (Standard Diagnostics, Inc., Kyonggi-do, South Korea)' as a tie-breaker test. To detect Hepatitis B and Hepatitis C "Rapid Sigma Dipstrip (Organics Ltd., Israel)" were used.

Key Findings

HIV, HCV, HBV and STI Prevalence

- HIV prevalence among PWIDs in the Kathmandu Valley in 2015 was found to be 6.4 percent (N=340).
- HCV prevalence among PWIDs in the Kathmandu Valley in 2015 was found to be 22 percent (N=340).
- Although investigations into HBV prevalence among PWIDs in the Kathmandu Valley in 2015 were carried out, the results were found to be indeterminate.
- Further, investigations into STI prevalence among PWIDs in the Kathmandu Valley in 2015 were also found to be indeterminate.

Socio-demographic Characteristics

Participating PWID were mostly youth up to the ages of 30 (74.4%), with a median age of 25 years. Nearly two thirds of PWIDs (74.6%) were found to be single. The survey also revealed that 19.4 percent of the PWIDs were currently living with their spouses while 80.3 percent were currently living without a sexual partner and/or alone. More than half the population of PWIDs in the Kathmandu Valley[1] (51.1%) had completed their secondary level of education. It was found that School Leaving Certificate (SLC) and Higher Education had been completed by 38.4 percent of the respondents. Also, it was found that very few of the respondents (2.9%) had ever attended school. Overall, 31.0 percent of respondents were from disadvantaged '*Janajati'* groups and 40.1 percent of the PWIDs belonged to upper cast groups such as '*Brahmin*s' and *'Chhetris'* etc.).

Injecting Practices of PWIDs

A little over a third of the PWIDs (32.1%) had been injecting drugs for over 5 years while 33.1 percent had been found to be injecting for past 2-5 years. The survey indicated that 8.7 percent of the respondents had started injecting drugs more recently, within a year. Regarding the frequency of injections, in the week prior to the interview, 16 percent of the respondents reported that they had injected on an average of 4-6 times a week, while 27.2 percent were found to have injected at least 2-3 times a week. Further, 10.7 percent claimed to be injected daily. Likewise, the majority of the respondents (73.6%) reported injecting only once a day, while asked about the

[1] The Kathmandu Valley Consists of the Districts of Kathmandu, Lalitpur and Bhaktapur

frequency of drug injection in the last day. In addition, 4.1 percent said that they injected 3 or more times on the day before interview.

Sexual Behavior and Condom Use

A majority of PWIDs (74.5%) in the survey districts reported to be sexually active within the past 12 months. Among them, 81.4 percent claimed to have had their first sexual contact before the age of twenty. A little over half (50.9%) claimed to have had more than one sexual partner during the same period. Among those, who had sexual intercourse with female sex worker in the past 12 months, a majority of the PWIDs, (76.6%) said that they had used condoms consistently during each sexual act, Similarly, 39 percent of PWIDs, who had non-regular female sex partner in the past 12 months, claimed to have had consistent condom use, while 14.9 percent of PWIDs, who had regular female sex partner in the past 12 months, claimed to have had consistent condom use.

Knowledge about HIV

Knowledge about the modes of transmission of HIV was also analyzed based on their understanding of the three main HIV prevention measures; including abstinence (A); being faithful or monogamous with one partner (B); and consistent condom use (C). The majority (77.7%) of the PWIDs seemed to be aware that using a condom every time during sex (C) could prevent them from contracting HIV. While 80.7 percent believed that being faithful to one person (B) and nearly half (42.4%) believed abstinence from sex (A) would prevent them from contracting HIV. Additionally, a high majority (86.6%) seemed to be aware that a healthy-looking person could be infected with HIV (D). Around the same number of respondents (93.5%) demonstrated knowledge that sharing a meal with an HIV infected person could not transmit HIV (F). Almost three fourths of the PWIDs (73.4%) demonstrated knowledge that the HIV virus could not be transmitted through mosquito bites.

Exposure to HIV/AIDS Related Programs

In the past year, 47 percent of PWIDs claimed to have met peer/outreach educators, 57.7 percent claimed to have visited drop-in centers(DIC), and 19.8 percent of the respondents claimed to have been visited by HIV Testing and Counseling (HTC) services.

Chapter 1

1 Introduction

1.1 Background

Over the years, HIV has been one of the major public health concerns in Nepal. At the policy level it has been a national priority as indicated in the National HIV and AIDS Strategy (2011-2016). Ever since the reporting of the first case of HIV in Nepal in 1988, HIV prevalence has been seen to be in a decreasing trend. According to the National estimation, approximately 39,249 people [GARPR 2014] in Nepal are estimated to be HIV sero-positive. Key affected populations (KAP) at higher risk of HIV transmission in Nepal include Female Sex Workers (FSW), Male Sex Worker (MSW), their clients as well as their immediate sexual partners, People Who Inject Drugs (PWID), Male Labor Migrants (MLM) and Men who have Sex with Men (MSM). Although data shows the general prevalence for HIV in the adult population of Nepal to be around 0.20% for Nepal (2014); this rate is high among key population such as 6.3% among PWID and 6.8% among MSW population. Hence, Nepal is categorized as concentrated epidemic.

Integrated Biological and Behavioral Surveillance (IBBS) surveys have been conducted at regular intervals in Nepal. IBBS surveys help to collect two distinct types of data, namely, biological and behavioral, from a single set of participants. It also helps to understand the existing and emerging dynamics of the HIV epidemic, so that appropriate interventions can be designed in order to prevent the spread of the virus. By integrating and projecting biological data with behavioral data, IBBS surveys are extremely effective in helping to understand the dynamic trends and HIV related behaviors risk factors among key affected populations.

Historically, since 2002 Nepal has been successfully carrying out IBBS surveys among KAP. Over this time period, more than 50 IBBS and Behavioral Surveillance Surveys (BSS) surveys have been carried out in Nepal funded by different technical partners such as USAID the Global Fund and the Pooled Fund mechanism, in close collaboration with NCASC and key stakeholders.

The latest round (round VI, 2015) of IBBS survey among People Who Inject Drugs (PWIDs) in Kathmandu Valley was conducted with support from the pooled fund. PWIDs are considered one of key affected population for HIV transmission due to needles/syringes sharing behavior among peers and use of contaminated needles due to lack of access to clean needles and syringes. Moreover, high-risk sexual behavior associated with drug use is also another major factor contributing to the spread HIV through the general and non-injecting partners of PWIDs as bridging populations. The Round V IBBS surveys (2012) conducted among PWIDs in the eastern, western and far western districts of Nepal have shown high prevalence rates of HIV.

HIV prevalence among PWIDs is decreasing over time but it varies by location in Nepal. The first round of the IBBS surveys conducted in 2002 indicated a high prevalence of HIV (68%) among PWIDs in the Kathmandu Valley. The third round of IBBS surveys conducted in 2007 indicated 35 percent prevalence in the Kathmandu Valley. PWIDs of Kathmandu Valley are considered at a higher risk of HIV as compared to other cities of Nepal. In Kathmandu Valley, 22 percent of PWIDs were found to be HIV positive in 2003. Similarly, in the Eastern Terai region, HIV

prevalence of PWIDs was seen to be 11.7 percent in 2005; with 11 percent in 2007 and 8 percent in both 2009 and 2012.

Hepatitis B (HBV) and Hepatitis C (HCV)

For the first time in IBBS, prevalence of HBV and HCV was screened among the PWIDs in this current round. HBV and HCV infection has been a significant cause of morbidity and mortality globally, as well as the root cause of liver cirrhosis, liver cancer leading to liver failure. As a human carcinogen, the impact of HBV is secondary only to tobacco. HCV has been repeatedly linked to PWIDs populations and has been known to be one of the major causes of morbidity and mortality among this population.

Two billion people worldwide (Approximately, 30 percent of the world's population), have serologic evidence of past or present HBV infection. Data suggests that an estimated 360 million are chronic carriers, and approximately 20-25 percent of all chronic carriers will eventually die from one or another type of liver disease (ie such as hepatitis, cirrhosis, and/or hepatocellular carcinoma) resulting from infection with HBV. Worldwide the prevalence of HCV has been found to have increased to an estimated 170-200 Million people (3%) (El-Serag HB, 2012). In many countries, HCV-infection has been found to be as high as 60 percent to 94 percent (Nelson PK, 2011) among people who inject drugs.

In Nepal, the prevalence of chronic HBV-infection in the general population exists, and is estimated to be at around one percent (Shrestha SM, 2012). However, no recent epidemiological data is available, specifically for the PWID population. Thus, in this context, the integration of HBV sero prevalence among this population is important.

HCV infections in Nepal have been reported, mostly among blood donor populations and have been shown to range between 0.3-1.7percent. However, HCV prevalence among PWID populations have been shown to be between 50 -96 percent (Poudel et al., Kinkel et al., 2015). A study by UNDP in 2010 showed that the prevalence of HCV among was around 20 percent. As a sub-population among PLHIV populations, the prevalence among PWID populations was seen to be above 90 percent (UNDP report of Livelihood, 2010)

Among 15,000 blood donors in Nepal (as a proxy for the general population) HCV was recently found to be 0.2 percent (Tiwari BR, 2010). Meanwhile the only known data published in the past 15 years regarding HCV-prevalence among people who inject drugs from Nepal report 85.5 percent prevalence of HCV-antibodies as markers of current or past infection with HCV (ShresthaIL, 2003).

Knowing the HCV prevalence will also pave the way for assessing the genotype of the HCV virus. HCV-genotyping is necessary for the determination of treatment regimen, duration, cost and expected rates of treatment success. Recent publications from Nepal have shown that Genotype 3 is predominant followed by Genotype 1 (Kinkel et al., 2015), both of which can be treated with existing drug regimens.

Table 1-1: History of IBBS in Nepal among PWID

IBBS	Survey year	HIV Prevalence
PWIDs-Eastern	2003	35.1
	2005	31.6
	2007	17.1
	2009	8.1
	2012	8.1
Kathmandu valley	2002	68.0
	2005	52.0
	2007	35.0
	2009	21.0
	2011	6.0
Pokhara Valley	2003	22.0
	2005	22.0
	2007	7.0
	2009	3.0
	2011	5.0
PWIDs-Western	2003	N/A
	2005	11.7
	2007	11.0
	2009	8.0
	2012	5.0

1.2 Objectives of the Survey

In line with the previous IBBS surveys, this sixth round of surveys was also undertaken to determine the prevalence of HIV and STI and assess HIV-related risk behavior among PWIDs within the Kathmandu Valley.

The specific objectives include:

- To determine trends of HIV and STI prevalence in PWIDs population of Kathmandu Valley.
- To measure the prevalence of Hepatitis C (HCV) and Hepatitis B (HBV) among PWIDs population of Kathmandu Valley
- To assess HIV and STI-related risk behavior among the PWIDs population of Kathmandu Valley.
- To collect information related to socio-demographic characteristics; drug use needle sharing behaviors, sexual behavior including knowledge and use of condoms; knowledge of HIV and AIDS; knowledge and treatment of STIs; psychosocial factors and the exposure of PWIDs to available HIV and STI services in Kathmandu Valley;
- To explore the association between the risk behaviors related to HIV and other specified sexually transmitted infections among the PWIDs population of Kathmandu Valley.

Chapter 2

2 Methodology

2.1 Survey Population

A cross-sectional survey was conducted among PWID who are considered to be one of the key populations at higher risk of transmitting HIV and STI infections in Nepal. For the purposes of this survey, the definition for PWIDs is "*current males who inject drugs aged 16 years or above who have been injecting drugs for non-medical purpose at least three months prior to the date of survey.*"

2.2 Survey Sites

The survey was conducted within the Kathmandu Valley A survey center was established at Tilganga in Kathmandu to facilitate easy accessibility to the survey respondents. The survey center was equipped with nine separate rooms with initial greeting and registration areas, clinical observation areas, a laboratory testing area as well as counseling and interview room. Each of these rooms had appropriate and effective Information, Education and Communication (IEC) materials to provide information on HIV and AIDS and STIs.

2.3 Sampling

2.3.1 Sample Design

The respondent-driven sampling (RDS), a form of a chain-referral sampling, specifically targeted for hard to reach populations was used to recruit participants. The RDS, unlike the "snowball" method, attempts to overcome biases such as masking, volunteerism, and over sampling of groups with large networks. Thus, gives rise to unbiased estimates of population parameters (Heckathorn, 1997) and provides more representative samples.

Since it relies on social networks, RDS has the potential to reach individuals, who are hard to reach such as MSM, PWIDs, and MSW. In RDS, the sampling frame is created based on information collected from the participants during the sampling process itself. This information includes:

(1) Who was recruited by whom.

(2) The relationship of the participant to the recruiter (RDS population estimates are based on the assumption that the recruiter and the participant are acquainted with each other and are part of the same peer community group).

(3) Participants' personal network sizes (network size is used to estimate the average network size according to different sample characteristics such as gender, race/ethnicity, and age).

Since RDS population estimates are based on the recruiter and recruited knowing each another, RDS by design, encourages participants to recruit those they already know. This involves incentives for recruiters while limiting recruitment through quotas, so that recruitment is not wasted on strangers (Ramirez-Valles et. al., 2005).

The sampling process began with the selection of a set of people from the target population to serve as 'seeds.' A preliminary community consultation exercise prior to the field survey was carried out with help of local NGO partners to help acquaint the survey team with several PWIDs, their gathering locations and their networks. This

information helped to recruit a total of six PWIDs as "seeds". These "seeds" were selected from Kathmandu, Lalitpur and Bhaktapur.

The "seeds" were informed of the survey protocol and procedures and were encouraged to recruit other eligible individuals from their local social networks in order to participate in the survey. In some cases, local key informants helped in the "seed" recruitment process. After participating in the survey, each "seed" was provided with maximum of three recruitment coupons, which were used to recruit three subsequent respondents within their networks. This process was repeated with each subsequent survey participant till the required sample size was achieved. The referral coupon consisted of a unique serial number that linked the recruiter to his recruit.

2.3.2 Sample Size

In line with previous rounds of IBBS surveys, the sample size was determined by using basic statistical formula (Annex 2) and was determined at 340.

2.3.3 Seeds and Recruitment of PWIDs

As per the RDS methodology, the survey team, in consultation with motivators and relevant stakeholders first recruited a total of six PWIDs as 'seeds'.

Selected "seeds" were demographically heterogeneous in age, ethnicity and geographical distribution. Those "seeds" were informed about the survey protocols and procedures and were encouraged to recruit other eligible individuals from their social networks randomly to participate in the survey. The initial "seeds" used their three recruitment coupons to pass along to their peers who might be eligible for the survey. Thus the first wave of participants was recruited through the "seed" respondents.

Upon arrival at the survey site center (which had been set up at Tilganga in Kathmandu), the new recruits presented their coupons to the survey team. Those eligible for the survey were further inducted as a new functional "seed". Each uniquely coded coupon was used to monitor recruitment and was also recorded in the questionnaires. Among the six seeds, the maximum and minimum completed waves were eight and two respectively.

Dual incentive was provided to the respondents at two levels. Initially each participant was provided with an incentive for the participation in the survey and an additional incentive for each individual recruited by them.

All respondents participated voluntarily and consensually in the survey. An inclusion criterion was developed for participation in the survey. Those who failed to meet the criteria or unwilling to participate were not enrolled. Out of the total respondents, 12were found to be ineligible.

2.3.4 Control of Duplication

All recruited PWIDs were screened by a supervisor before being enrolled in the survey. Each participant was provided a unique ID number that was intended to identify his individual questionnaire, medical records, and blood specimen. The unique ID number was also instrumental in maintaining confidentiality and uniqueness of each respondent's data set and for the dissemination of the test results. After completion, each participant was informed that the same person would not be able to take part in more than one instance of the survey and thus should avoid recruiting any person who had already received a coupon from others and/or had already participated in the survey

or been inducted by another. To ensure that duplication and redundancy was avoided, the participant PWIDs were asked several questions related to:

- their experience of having undergone blood tests;
- the part of the body from where the blood was extracted;
- their experience with HIV tests (and/or other tests);
- previous meetings with Intrepid staff and peer educators and;
- possession of ID card with survey number;

Apart from that, the single survey site was setup to eliminate duplication.

2.4 Survey Instruments and Administration of Tools

The IBBS consisted of two separate components:

A. Behavioral Questionnaires

Quantitative data were collected through face-to-face interviews using a structured questionnaire. The structured questionnaires were used to gather behavioral data relating to sexual behavior, sex partners, use of condoms, exposure to ongoing HIV awareness programs and their participation in such programs and activities along with peer based networking as well as demographic and social characteristics. The questionnaire was developed based on the "*Guidelines for Repeated Behavioral Surveys in Populations at Risk of HIV, 2000*".

B. Biological Sample

Blood samples were collected from the participants for serological analysis for HIV, syphilis screening, Hepatitis B and Hepatitis C testing.

2.5 Data Collection Period

Data collection was carried out between the 18th of June to the 3rd of July, 2015 from the survey site center set up at Tilganga, Kathmandu; from 8:00 AM to 5:00 PM.

2.6 Survey Team Composition

The survey team was composed of; team leader, coordinator, research advisor, lab advisor, research officer, data analyst, lab supervisor and field officer for regular monitoring, supervision and management of entire survey process. Further, the survey team was expanded with field team consist of supervisor, interviewers, lab technicians, counselor, local motivators and support staffs.

2.7 Ethical Issues

In order to ensure adherence to the ethical principles of the study, as well as legitimacy, ethical approval was obtained from the Nepal Health Research Council (NHRC) prior to the commencement of the survey.

Respondents were informed about voluntary participation and were made aware of their rights to refusal to answering any question or withdrawal from the interview at any time. A consent form describing objectives of the survey, nature of participants' involvement, benefits they would receive, as well as confidentiality policy was clearly elucidated (See sample consent form in Annex-6).

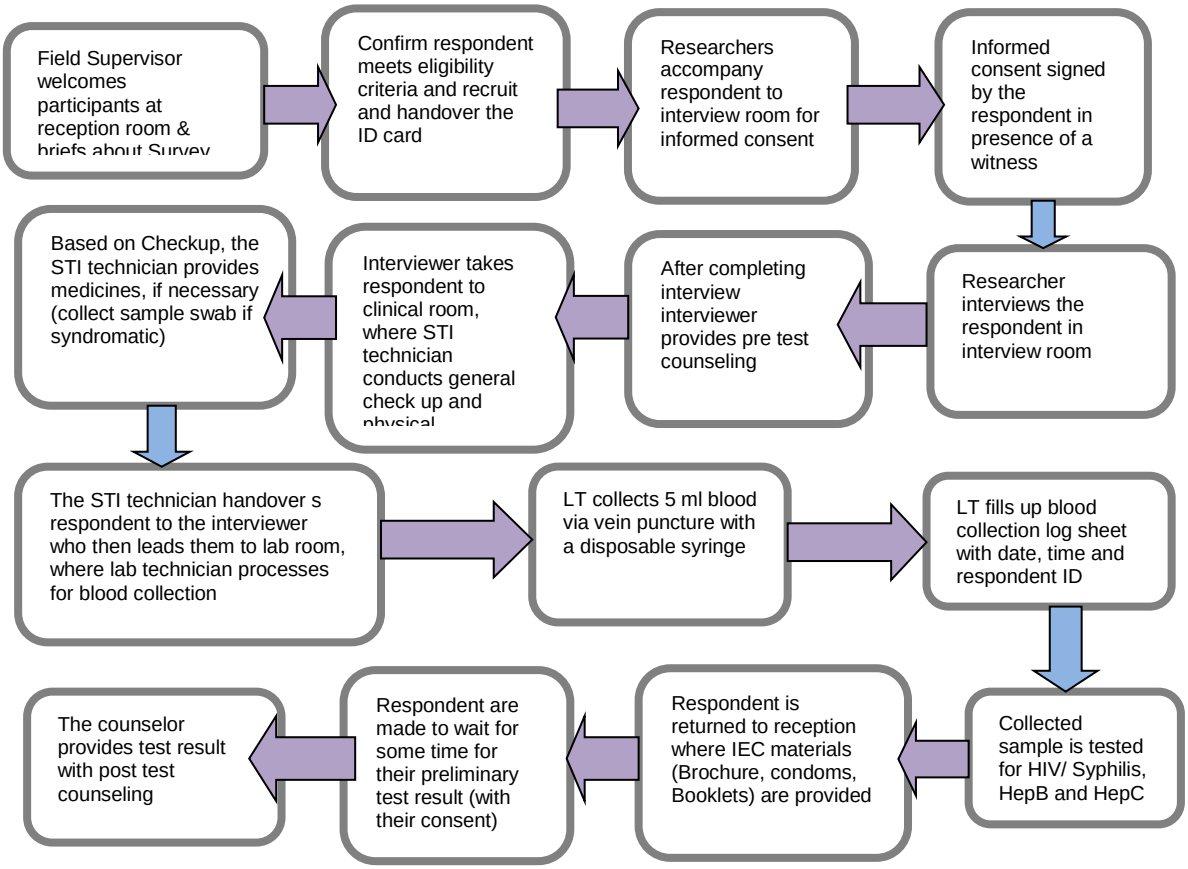
The participants' right to information, consensual volunteerism, privacy/confidentiality, adherence/compliance to both the ethical and human rights standards were maintained throughout the survey, including during the fieldwork and data entry. No personal identifiers flagged and the respondents were identified only by the provided unique ID code throughout the survey. Moreover, verbal informed consent was obtained from all participants prior to interview and collection of the blood samples in the presence of a witness.

2.8 Clinical and Laboratory Procedure

2.8.1 Clinical Procedure

Pre-test counseling sessions were held before the clinical examinations and blood sample collections. All respondents were then examined for clinical symptoms for STI and blood samples were collected for the detection of HIV, syphilis, Hepatitis B and Hepatitis C antibodies. Survey participants were provided with treatment for STI if clinical/observational and/or syndromic diagnosis was positive. Post-test counseling was also provided prior to the distribution of test results for HIV and STIs at these sites by experienced counselors. The process of recruitment of the respondents is outlined in the flowchart diagram given below (Figure 2.1)

Figure 2-1: Process post recruitment of the respondent



A standard medical procedure in accordance with the "National Guidelines on Case Management of Sexually Transmitted Infections 2012" was followed for clinical examination and clinical specimen collection. Survey participants were clinically checked for any symptoms of STIs by the Health Assistant who was also required to fill in a checklist with the information provided by the respondents (see Annex 5). The clinical examination included a general health check-up, measurement of vital signs

(i.e. blood pressure, body temperature, weight, and pulse) and a symptomatic examination for STIs for syndromatic treatment for respondents with STI symptoms as per guidelines. Other over-the-counter medicines such as analgesics, anti-inflammatories, antipyretics, antibiotics (paracetamol, alkalysing agents, and vitamins) were also given as required or as deemed necessary.

2.8.2 Collection, Storage and Transportation of Samples

A sample of 5 ml of whole blood was drawn from each survey participant using sterile, disposable and hypoallergenic syringes. After centrifuging, the serum was separated for laboratory diagnostic purposes and stored in a refrigerator to maintain the integrity sample. Each serum sample was labeled with the unique ID number of the survey participant. The specimens were transported to the Intrepid Nepal laboratory in Kathmandu by maintaining cold chain on a daily basis. The serum samples were stored at a temperature of 12°C to -20°C before transferring for quality assurance.

2.8.3 Laboratory Procedures

Laboratory service entailed screening all the subjects/participants with initial & confirmatory tests with validated immune-chromatography HIV 1-2 detection device or rapid kits. In addition to HIV-1/2 screening, rapid screening tests with rapid kits and confirmatory testing with the same kit in a different laboratory to determine the prevalence and status (current or history) of Syphilis. RPR titration test was used to ascertain the progression of Syphilis

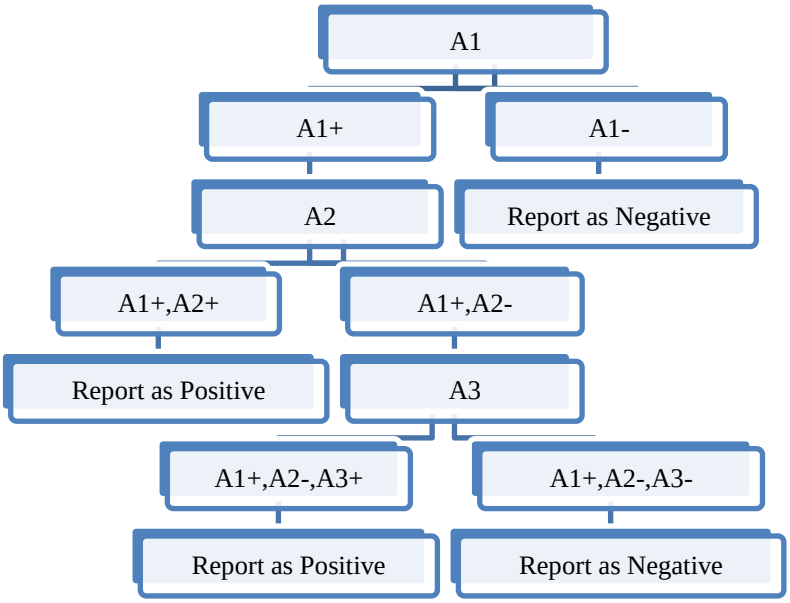
I) Blood Sample

Blood samples were tested for HIV antibody, HCV, HBV and Syphilis serology. Both HIV rapid tests and syphilis RPR tests were performed using the blood serum. The site laboratories were operationalized as per national guidelines. Quality assurance tests were performed on all positive samples and a random 10% of negative samples, EQAS was done by the National Public Health Laboratory (NPHL) based in Kathmandu for both HIV and Syphilis, HBV, HCV testing.

HIV1/2

Detection of HIV infection was carried out through rapid test kits following the HIV testing strategy II algorithm, which is based upon the "National Guidelines for Voluntary HIV and AIDS Counseling and Testing 2007". Determine HIV1/2 (Abbott, Japan), and Uni-Gold HIV1/2 (Trinity Biotech, Ireland) and, Stat Pak were used as lateral flow (rapid immune-chromatography) kits for testing the presence of antibodies against HIV in the serum. Serum that tested positive with the initial kits were confirmed with a second kit. Samples that were found reactive on both tests were considered HIV antibody positive. Samples that were non-reactive on the first test were considered HIV antibody negative. Any sample that was reactive on the first test but non-reactive on the second was repeated with a third "tiebreaker" kit. The quality of the assay was assured by the in-built control of each kit (Figure 2.2 and Table 2-1).

Figure 2-2: Algorithms of HIV Testing



Reference Note	
A1 (First test):	→ Determine HIV ½
A2 (Second test):	→ Uni-Gold HIV
A3(Third test):	→ Stat Pak
"+"	→ Reactive
"-"	→ Non-reactive

Table 2-1: Sensitivity and Specificity of HIV1/2Kits

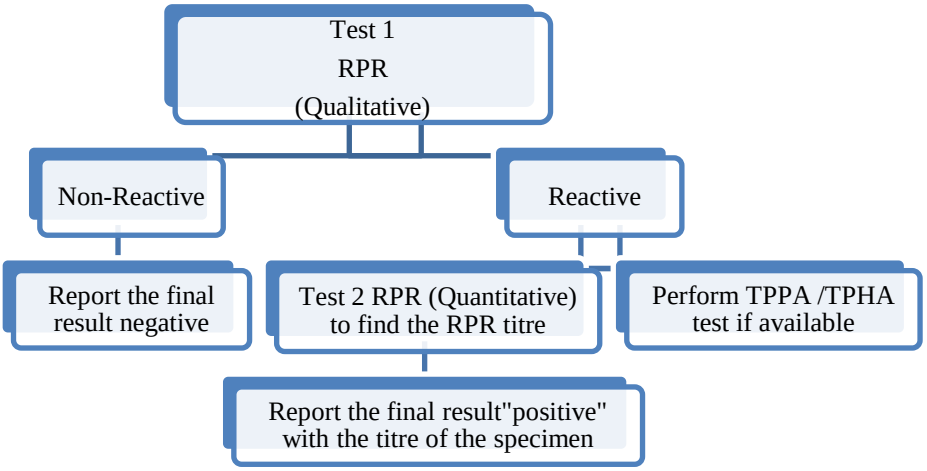
Test Kits	Company	Init	Confirm	Tiebreak	Antigen Type	Spec.	Sens.
Determine	Allere	X			RecomHIV-1 and HIV-2	99.4%	100.0%
Uni-Gold	Trinity Biotech		X		HIV-1andHIV-2	100.0%	100.0%
Statpak	CHEM BIO			X	HIV-1(gp41;p24)-2 (gp36)	99.3%	100.0%

Syphilis

The Syphilis test was performed using the National algorithm based on the "National Guidelines on Case Management of Sexually Transmitted Infections, 2009", NCASC, Nepal). The Serum was tested for non-specific and specific treponemal agents. A non-specific treponemal test, Rapid Plasma Reagin (RPR) [IMPACT, Alere group of companies, USA] was used for both qualitative screening and quantitative titration. All RPR reactive serum was confirmed using specific Treponemapallidum Particle Agglutination (TPPA) test (Fujirebio Inc.) at Intrepid laboratory. Serum samples that tested RPR positive with titer value above or equal to 1:4 were reported as active

syphilis; titrations less than 1:8 were reported as cases with a history of syphilis. The quality of reagents and test cards of the RPR test kit were assessed daily on-site using a set of strong and moderate positive and negative controls (Figure 2-3).

Figure 2-3: Syphilis testing algorithm



Syphilis RPR and TPPA test:

The combination of RPR Qualitative, RPR titre and TPPA test result were used for interpretation of the syphilis status of the clients as follows:

→ RPR positive with more than or equal to 1:8 titre value and positive TPPA test confirms the Active Syphilis cases.

→ RPR positive with less than 1:8 titre values with positive TPPA test confirms the History Syphilis cases.

→ RPR positive with greater than or, lower than or, equal to 1:8 titre with negative TPPA test is considered Syphilis negative cases. (This may be due to unspecific syphilis RPR positive scenarios.)

Hepatitis B and Hepatitis C infection testing

The RapidSignal HCV whole blood/serum/plasma dipstrip kit anti-HCV antibody detection procedure:

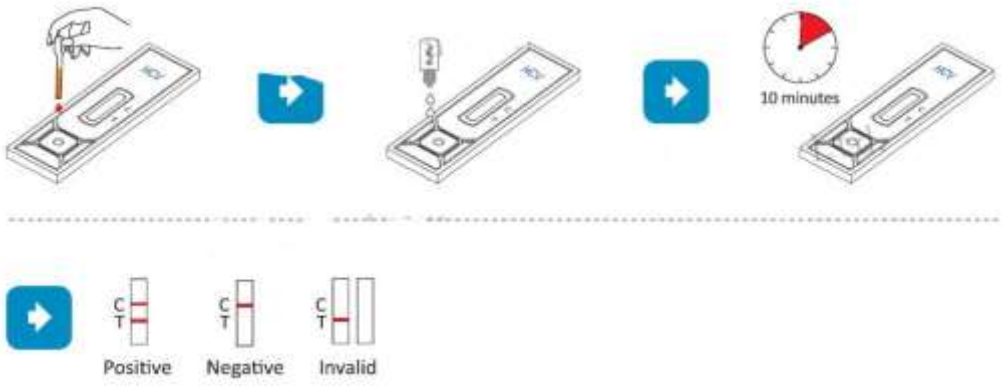
The RapidSignal HCV whole blood/serum/plasma dipstrip kit was maintained under refrigeration. It was monitored for the expiration dates or any damage or leakage. The kit components (dipstrips and buffer) were brought to room temperature. The plasma samples to be tested were also thawed at room temperature.

To begin the testing, the test dipstrip was removed from a sealed foil pouch. The tape was peeled off from the test stripe card and the dipstrip was stuck in the middle of the test card with arrows pointing down on the test card. The strip card was labeled with the patient's Unique ID number. Then, 10 ul of thawed plasma sample was then pipetted out and added onto the specimen pad of the dip strip. Then, two full drops of buffer were added and the timer was commenced. At the end of 10 minutes, the result was interpreted.

The sample was scored as reactive if two distinct red lines appeared- one in the control region and one in the test region. The sample was scored negative if the red line appeared only along the control line. If the red line did not appear at the control line

irrespective of the test line, the test was considered invalid and the whole test was repeated using a new kit (Figure 2-4).

Figure 2-4 : HCV antibody detection procedure:



The RapidSignal HBsAg serum/plasma dipstrip kit HBV surface antigen detection procedure:

The RapidSignal HBsAg serum/plasma dipstrip kit was taken out of the refrigerator. It was inspected for the expiration date or any damage or leakage. The kit components (dipstrip pouches and buffer) were brought to room temperature. The plasma samples to be tested were also thawed at room temperature.

To initiate testing, the test dipstrip was removed from the sealed foil pouch. The test dipstrip, with its arrows pointing towards the plasma sample, was immersed vertically in the sample for 10-15 seconds. Care was taken not to surpass the sample beyond the maximum line of the test dipstrip while immersing it. Then, the dipstrip was placed on a non-absorbent flat surface. The timer was initiated with a waiting period of 15 minutes. At the end of 15 minutes, the result was interpreted as described and illustrated below.

The sample was scored as reactive if two distinct red lines appeared- one in the control region and one in the test region. The sample was scored as negative if the red line appeared only along the control line. If the red line did not appear at the control line irrespective of the test line, the test was considered invalid and the whole test was repeated using new kit (Figure 2-5).

Figure 2-5 : HBV surface antigen detection procedure

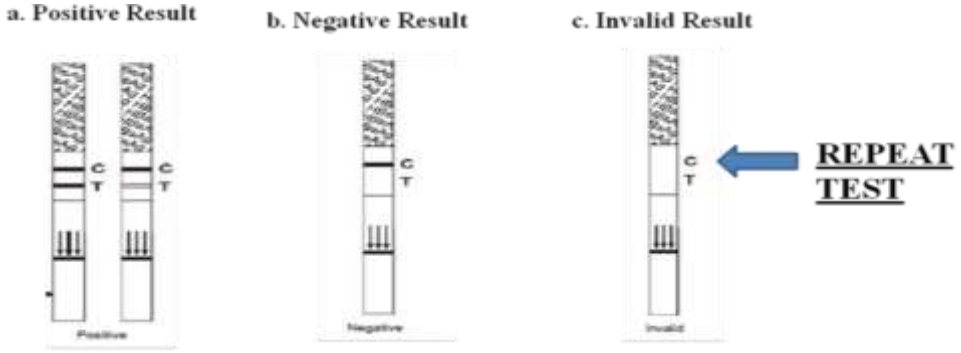


Figure 2-6: Hepatitis B (HBV) Algorithm

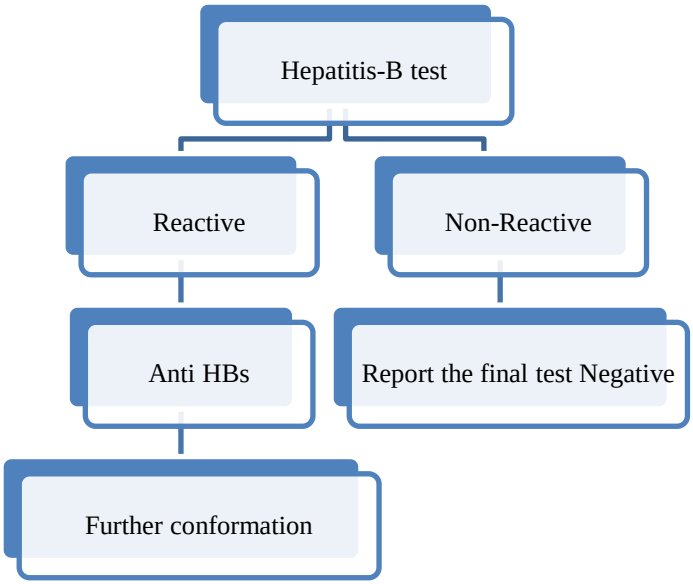
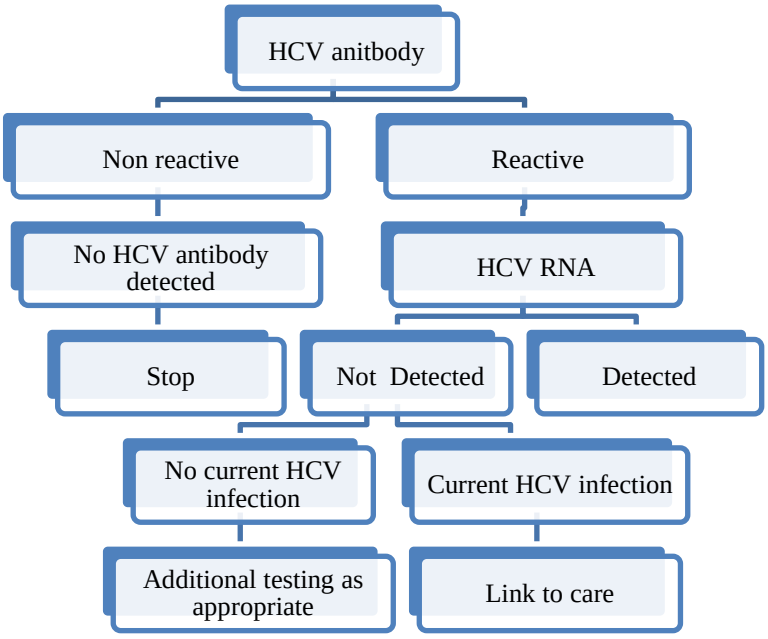


Figure 2-7: Hepatitis C (HCV) Algorithm



2.9 Precautions, Disposal Mechanism and Post Exposure Management

The universal precautions and post exposure management was followed as per the recommendations of the Center for Disease Control (CDC, USA) and Nepal's national guidelines where applicable. In order to minimize the possible spread of infection to clinical personnel and to the local community, a proper disposal mechanism was implemented. The color coded disposable plastic bags were inserted in a thick leak-proof container with a tight seal. All materials were decontaminated by disinfecting or incinerating before disposal. Contaminated materials including specimens of bodily fluids, cotton gauze and broken glassware including used needles were decontaminated in 0.5% Sodium Hypochlorite on a daily basis. The plastic material, papers and cotton were incinerated. The used Sodium Hypochlorite was poured down the drain or in a flushable toilet.

2.10 Quality Control of Laboratory Tests

On-site and external quality assurance of the samples was maintained while testing. The on-site audit includes the quality control of test kits, record-keeping, and observation of staff performance. The on-site quality control of the kit was assessed by in-built control mechanisms provided by the kit itself. While trained laboratory personnel were responsible for record-keeping on a daily basis along with a quality control test that was performed, staff performance was supervised by the supervisor who was stationed in the field.

External Quality Control

The External Quality Control or Blind Rechecking was performed by retesting samples in Intrepid Nepal's laboratory in Kathmandu by the core study team members. All positives and 10% negative samples were sent to the NPHL.

2.11 Survey Management and Coordination

The survey was managed overall by Intrepid Nepal under the supervision of NCASC. The survey protocol was developed in close coordination with NCASC which was strictly followed during the entire survey period. The core team members of Intrepid Nepal were responsible for the management of the entire survey process that included:

- The development and finalization of the research tools in the Nepali Language,
- Laboratory sops,
- Training of the field teams,
- Field planning, field monitoring matrixes,
- Data management, data analysis and
- Report preparation.

2.12 Training and Field Testing

Before field implementation, the survey team was provided with 5 days of intensive training from June 11-15, 2015. The training session covered:

- The survey objectives,
- Overview of IBBS,
- HIV epidemic and surveillance system in Nepal,
- Survey design and approach,
- Sampling approaches,
- Characteristics of the PWIDs population,
- Rapport-building techniques,
- Content and behavioral interviews and
- Survey protocol.

The training session included mock practice, role play as well as theory classes facilitated by resource personnel from NCASC, FHI 360, NPHL and Intrepid Nepal. The practical session of lab and STI sessions were conducted at Intrepid Nepal laboratory while HIV pre-and post-test counseling was delivered by a technical expert.

During training sessions with the help of *Sathi Samuha* (NGO working for the PWID) non sampled PWIDs were contacted for the pretest of the study tools. The pretesting was carried out at the *Sathi Samuha* office, *Sinamangal* and consent was taken from all the study participants. Ten PWIDs were interviewed during the pretesting. The tools were revised based on pretesting and shared with the Strategic Information Technical Working Group (SITWG) members. The SITWG members finalized the tools based on the findings of pretesting.

2.13 Monitoring of the Survey Field Work and Quality Assurance

To ensure quality throughout the survey period, stringent monitoring and follow-up mechanisms were adopted. Adequate references were sought during desk reviews to develop relevant and efficient survey tools so as to ensure that the field researchers were well capacitated to gather data in coordination with NCASC. Regular field checks and follow-up was done by Intrepid Nepal, NCASC and other stakeholders throughout the entire field work.

Completed questionnaires were reviewed for inconsistencies by field supervisors and discussed with team members every day. They were also required to monitor and manage the required cold chain for EQAS and test kits. Key research team members monitored and supervised field activities. The Field Coordinatorensured that this survey protocol was strictly followed. Intrepid Nepal submitted a field progress update to NCASC on weekly basis. The observations and suggestions from the monitoring team were shared with the field team at the end of the monitoring visits and were also communicated to Intrepid Nepal as well as NCASC.

2.14 Post-Test Counseling and Test Result Distribution

All Survey participants were provided with their respective individual HIV, HCV, HBV and Syphilis test results with post-test counseling by a trained counselor in a confidential setting. Counseling session was also focused on raising awareness on high-risk behaviors pertaining to STIs and HIV.

2.15 Data Management and Analysis

All completed questionnaires were transported to the Intrepid Nepal office for coding and data entry. After thorough rechecking, the data was entered into a computer using the CSPro software package. Double entry was adopted to minimize errors during the data entry and ensure quality of the data. Furthermore batch editing and programming was developed to check for further inconsistencies. Data files were transferred to SPSS and RDSAT for further complex analysis.

Raw data was prepared using SPSS. This included generating new variables and re-coding missing values. Datasets were then converted to Microsoft Excel files and then to RDS files (Tab Delimitated Text Format). Prevalence estimates of key-indicators were performed in RDSAT. With RDSAT the pull-in outlier option was used to eliminate extremely small and large outliers in the reported network sizes. When the program encountered an individual whose network size was considered to be outside of the specified bounds, their network size was set to the value of the nearest lower or upper bound (by percentage) with the help of the pull-in outliers' options. RDSAT analysis for this Survey used 5% pull-in outliers of network size. The reported minimum network size was 3 and maximum was 20 while adjusting the pull – in outliers. Based on the reporting, the not adjusted parameters were minimum 2 and maximum 60 pull–in outliers. Simple statistical tools-frequency distribution,

percentages, range, and proportion, mean and median, were used to analyze the results of the survey. Both clinical and behavioral data were used to examine the relationship between the socio-demographic characteristics, HIV status, and sexual behaviors.

Output values that have been analyzed using RDSAT are the estimated population proportions. Further, due to the limitations of RDSAT, multiple responses variables as well as some other variables have been analyzed using SPSS.

In order to draw up a comparative analysis of the behavioral and prevalence trends over the years, 'chi-square test' was performed for trend analysis.

2.16 Dissemination of IBBS Survey Findings

As planned, IBBS survey result was disseminated at three levels:

→ *At the Program Level* - Key programmatic findings were shared with major stakeholders of the INGO, NGO and NCASC program persons and their related comments were incorporated into the report.

→ *At the Community Level*- Findings were shared with the PWID community and local stakeholders at the survey districts and their suggestions were incorporated into the report

→ *At the National Level*- It was shared at the national level in Kathmandu among a wider group of government, non-government organizations, donor agencies and stakeholders working in the field of HIV and AIDS in Nepal. This was done primarily as an update on the status and the trends of the HIV infections among PWIDs Populations to draw possible policy and program implications.

2.17 Intended use of IBBS Survey Results

The survey results are primarily intended to be used for:

- Tracking the trends in HIV and STI prevalence
- Baseline data for HBV and HCV
- Identifying high risk behaviors
- Estimating and projecting HIV infection
- Evaluating the progress of HIV prevention interventions

2.18 Methodological Limitations of the Survey

As PWIDs are a hard to reach populations, and in many instances, due to various socio cultural reasons a hidden population, recruited sample sizes may not be enough adequately to represent the dynamics of PWID populations. Due to the mobile nature of this population there is always a certain amount of variance. The initial "seeds" were selected purposively and this in itself could be one of the limitations for the survey. However, the subsequent waves were adequate to exclude any bias introduced through this.

Chapter 3

3 Socio-Demographic Characteristics of PWIDs

This chapter deals with the socio-demographic characteristics of the PWIDs in the Kathmandu Valley.

3.1 Demographic Characteristics

The data presented in Table 3.1 reveals that a relatively high proportion of PWIDs participating in this survey were quite young. Almost two thirds of respondents (64%) were in their twenties and 10.4 percent were still under 20 years of age. One fourth (25.6%) were between the ages of 30 and 55. The age of the participants ranged from 16 to 55 years with a median age of 25 years.

According to the findings of this survey, data reveals that most of the PWIDS were unmarried (74.6%), a small proportion of the respondents (2.9%) were once married but now are either divorced or separated from their spouses or in some cases were widowers. Almost 71 percent were found to have been married before the age of 25 years. The median age at which the PWIDs were married for the first time indicated at 22 years. Among those currently married, 87.2 percent were seen to be living with their wives, whereas 12.8 percent PWIDs lived alone or without a sexual partner (**Error! eference source not found.**).

Table 3-1: Demographic Characteristics

	N=340	%	CI
Demographic Characteristics			
Age			
16-19 Years	37	10.4	6.5 - 15.2
20-24 Years	129	39.7	33.4 - 45.4
25-29 Years	87	24.3	17.9 - 29.8
30-34 Years	57	17.7	12.6 - 23.6
35 Years and above	30	7.9	5.3 - 12.2
Mean Age ± Std. Dev.	**26.2 ± 6.28**		
Median Age (Range)	**25 (16 – 55)**		
Marital Status			
Unmarried	247	74.6	69.3 - 79.5
Married	83	22.5	17.9 - 27.9
Divorced/separated	10	2.9	0.9 - 5.3
PWIDs living with			
Wife	70	19.4	15.4 - 24.7
With Other Sexual Partner	2	0.3	0.2 - 0.7
Without Sexual Partner/Alone	268	80.3	75.0 - 84.3
Age at first Marriage	**N=93**		
≤19 Years	23	12.6	0.5 - 75.7
20-24 Years	45	58.1	12.6 - 9.0
25 Years and above	25	29.3	0.9 - 48.5
Mean Age ± Std. Dev.	**22.4 ± 4.4**		

Median Age (Range)	**22 (12 – 38)**		
Married PWID Living With	**N=83**		
Wife	70	87.2	65.9 - 100.0
With Other Sexual Partner	1	0.0	0.0 - 0.0
Without Sexual Partner/Alone	12	12.8	0.0 - 34.1

3.2 Social Characteristics

Analysis of the Social characteristics shows that within the Kathmandu Valley, 89.5 percent of PWIDs had attended secondary school or higher education. 5.8 percent had attended primary school, 2.9 percent were literate but with no formal education, and 1.7 percent were illiterate.

Based on ethnic disaggregation, 22.6 percent of PWIDs belonged to the relatively advantaged Janajati, 31 percent were disadvantaged Janajati, 40.1 percent belonged to upper caste groups, and 0.5 percent belonged to disadvantaged non-dalit terai caste groups while 2 percent belonged to religious minorities.

A majority of PWIDs (56.9%) were found to have been born and raised in the valley and 22.4 percent had spent five or more years within the valley. Also, the data indicated that 20.7 percent of the respondents had lived in the Kathmandu Valley for less than five years (Table 3-2).

Table 3-2: Social Characteristics

	N=340	**%**	**CI**
Education			
Illiterate	9	1.7	0.4 - 3.3
Primary	29	5.8	3.2 - 9.3
Secondary	182	51.1	44.8 - 58.8
SLC and above	111	38.4	31.0 - 45.5
Literate, no schooling	9	2.9	0.6 - 4.3
Ethnicity			
Dalit	13	3.9	1.5 - 7.1
Disadvantaged Janajati	99	31.0	25.8 - 37.0
Disadvantaged non-dalit Terai caste groups	1	0.5	0.0 - 0.9
Religious Minorities	2	2.0	0.0 - 3.4
Relatively advantaged Janajati	93	22.6	17.4 - 29.3
Upper caste groups	132	40.1	33.3 - 46.5
Duration of stay in Kathmandu Valley			
Since birth	196	56.9	51.5 - 63.9
≤ 5 years	68	20.7	15.2 - 24.9
More than 5 years	76	22.4	17.6 - 27.8

3.3 History of Imprisonment

History of imprisonment is generally considered a difficult area to assess, particularly due to fear of marginalization, shame and discrimination including social perception. Among the survey participants about two third of PWIDs (66.4%) reported having been imprisoned or detained at one time or another for various reasons by law enforcement

and more than half of them (56.2%) claimed to have been imprisoned or detained within the past year. In the past year 63.1 percent cited being jailed or imprisoned because of drug offenses and 59.8 percent reported being imprisoned two or more times within the past year. However, only 10.9 percent of the respondents said that they had injected drugs while incarcerated (Table 3.3).

Table 3-3: Imprisoned History

	N=340	**%**	**CI**
Respondent ever imprisoned or detained for any reason			
Yes	239	66.4	60.9 - 73.5
No	101	33.6	26.5 - 39.1
Respondent imprisoned or detained for any reason in the past one year	**N=239**		
Yes	124	56.2	46.9 - 66.3
No	115	43.8	35.9 - 52.5
Respondent jailed/imprisoned in the past one year because of drugs	**N=124**		
Yes	81	63.1	47.4 - 76.3
No	43	36.9	23.7 - 52.6
Frequency of jailed/imprisoned in the past one year because of drugs	**N=81**		
Once	36	40.2	4.2 – 68.9
Twice	18	6.6	0.0 – 40.3
Three and more	27	53.2	0.0 - 73.6
Ever injected drugs during the jailed/imprisoned	**N=81**		
Yes	3	10.9	0.0 - 17.4
No	78	89.1	82.2 - 100.0

Chapter 4

4 Prevalence of HIV, HCV, HBV and Syphilis

4.1 HIV, HCV, HBV and Syphilis Prevalence

HIV, HCV, HBV and STI Prevalence has been a matter of national public health concern. In the Kathmandu Valley, about 6.4 percent of PWIDs were estimated to be HIV-positive. Out of a sample size of 340 PWIDs, none had a history of Syphilis and no one had been diagnosed with a current active case of these morbidities. There was no indication of HBV prevalence among the PWIDs while 22 percent PWIDs were found to be harboring HCV antibodies indicating that they were infected with HCV (Table 4-1).

Table 4-1: HIV, HCV, HBV and Syphilis Prevalence

Test for	%	CI	N
HIV	6.4	3.5 - 9.6	340
HepC	22.0	17.3 - 27.0	340
HepB	Nil	-	340
Syphilis	Nil	-	340

4.2 Relation between Socio-Demographic Characteristics and HIV Infection

In order to understand the dynamics of HIV transmission rates among social classes it is necessary to understand the relation between socio-demographic characteristics and prevalence of HIV Infection and its socio economic implications.

Table 4.2 shows the relation of HIV infection and selected socio-demographic characteristics among the respondents. Out of a cohort of 340 PWIDs, 6.5 percent PWIDs aged 20 and above were HIV infected while 9.9 percent of the PWIDs who were married were seen to be HIV infected. About 6 percent of PWIDs who had attended formal schooling were seen to have HIV prevalence (Table 4.2).

Table 4-2: Relation between Socio-Demographic Characteristics and HIV Infection

	%	CI	N
Age			
< 20 years	6.1	0.0 - 18.9	37
20 years and above	6.5	3.5 - 10.0	303
Marital status			
Ever married	9.9	3.9 - 17.8	93
Never married	5.1	2.4 - 8.6	247
Literacy			
Illiterate/Literate no formal schooling	3.4	0.0 - 12.6	18
Formal School	6.4	3.5 - 9.8	322

4.3 Relation between Drug Injection Behavior and HIV

The history of drug injecting behavior of respondents with respect to prevalence ratios can give us valuable insight into behavioral patterns that can help to determine behavioral risk factors for transmission. The relationship between HIV prevalence and

duration of drug injection, the frequency of injections during the past week, and the type of syringes they used has been reviewed in this section.

About 12 percent of the PWIDs who had been injecting drugs for more than five years were found to be HIV-positive. The HIV prevalence was found to be comparatively lower among those who had been injecting for two to five years (1.7%). PWIDs who claimed to be injecting two or more times a day were found to have high HIV prevalence (15.5%). About 41 percent of PWIDs had HIV infection who had used a needle or syringe kept hidden in public place during the past week (Table 4.3).

Table 4-3: Relation between Drug Injecting Behavior and HIV Infection

	%	CI	N
Injecting drugs since			
Up to 11 months	8.4	0.0 - 18.3	30
12-24 months	6.1	0.7 - 13.5	70
25-60 month	1.7	0.3 - 3.5	121
61 + months	12.2	5.6 - 21.3	119
Frequency of injected drugs in the past week			
Not injected	3.4	0.4 - 7.9	91
Up to 6 times a week	7.0	2.5 - 12.4	159
Once a day	4.1	0.0 - 12.6	46
2 or more times a day	15.5	5.3 - 29.2	44
Used other's previously used needle/syringe during the past week			
Not injected/Never Used	5.4	3.0 - 8.1	332
Used	30.6	0.0 - 70.1	8
Used a needle/syringe kept in public place during the past week			
Never Used	5.4	3.1 - 8.2	332
Used	40.8	0.0 - 78.9	8

4.4 Relationship between Sexual Behavior and HIV

Sexual Behavior and HIV are intricately interconnected due to the fact that sexual transmission has been known to be one of the major routes of transmission for some time now, especially in highly mobile populations. The examination of the sexual behavior and its association with HIV infection among PWIDs in the Kathmandu Valley indicates that a higher proportion of PWIDs who had sex with a non-regular partner in the last 12 months (7.1%) were HIV-positive as compared with those who had sex with a FSW (4.8%) or their regular partners (4.5%). About 12 percent of PWIDs who reported to have had one female sex worker partner were found to have HIV infection. (Table 4.4)

Table 4-4: Relationship between Sexual Behavior and HIV

	%	CI	N
Sex with a regular female sex partner in the past 12 months			
Yes	4.5	1.2 - 9.3	86
No	7.1	3.3 - 11.1	254
Sex with non- regular female sex partner in the past 12 months			
Yes	7.1	2.4 - 13.7	156
No	6.3	2.7 - 11.3	184
Sex with female sex worker in the past 12 months			
Yes	4.8	0.7 - 11.7	81
No	6.8	3.5 - 10.8	259
Number of regular partner in the past 12 months			
None	6.8	3.5 - 10.6	254
1 partner	5.9	2.3 - 10.6	84
More than one partner	0.0	- - -	2
Number of non-regular partner in the past 12 months			
None	6.4	3.0 - 10.4	184
1 partner	9.1	1.9 - 18.2	76
More than one partner	4.1	0.6 - 9.4	80
Number of female sex workers in the past 12 months			
None	6.5	3.4 - 10.0	202
1 partner	12.1	0.0 - 33.1	57
More than one partner	3.3	0.0 - 8.2	81

4.5 Relation between Socio-Demographic Characteristics and HepC Infection

Out of 340 PWIDs, 23.3 percent PWIDs had HCV prevalence who were 20 years and above while 33.0 percent PWIDs who were married were HCV infected. About 28.4 percent of PWIDs had HCV prevalence who were illiterate and had not attended formal schooling (Table 4-5).

Table 4-5: Relation between Socio-Demographic Characteristics and HepC Infection

	%	CI	N
Age			
< 20 years	7.7	1.5 - 18.8	37
20 years and above	23.3	18.4 - 28.7	303
Marital status			
Ever married	33.0	22.7 - 45.6	93
Never married	17.9	12.6 - 23.0	247
Literacy			
Illiterate/Literate no formal schooling	28.4	5.6 - 55.6	18
Formal School	21.5	16.7 - 26.7	322

4.6 Relation between Drug Injection Behavior and HepC

About 38.5 percent of the PWIDs who had been injecting drugs for more than five years were HCV infected. The HCV prevalence was comparatively lower among those who had been injecting for less than a year (9.2%). PWIDs who were injecting two or more times a day had HCV prevalence (24.1%). About 26 percent of PWIDs who had used previously used needle/syringes and about 36 percent of them who had used needle/syringe kept in public place during the past week had HCV prevalence (Table 4-6).

Table 4-6: Relation between Drug Injecting Behavior and HepC Infection

	%	CI	N
Injecting drugs since			
Up to 11 months	9.2	2.8 - 25.6	30
12-24 months	13.8	5.8 - 22.4	70
25-60 month	14.7	7.4 - 23.3	121
61 + months	38.5	29.4 - 50.0	119
Frequency of injected drugs in the past week			
Not injected	11.5	5.1 - 19.4	91
Up to 6 times a week	27.6	19.5 - 35.1	159
Once a day	21.6	8.9 - 38.2	46
2 or more times a day	24.1	13.4 - 37.6	44
Used other's previously used needle/syringe during the past week			
Not injected/Never Used	21.6	16.9 - 26.8	332
Used	26.1	8.0 - 68.4	8
Used a needle/syringe kept in public place during the past week			
Never Used	21.5	16.9 - 26.6	332
Used	35.9	7.2 - 77.4	8

4.7 Relationship between Sexual Behavior and HepC

The examination of the sexual behavior and its association with HCV among PWIDs in the Kathmandu Valley has indicated that higher proportion of PWIDs who had sex with a non-regular partner in the last 12 months (21.0%) were HCV infected than those who had sex with a FSW (18.6%) or their regular partners (31.6%), although the actual infection dynamics are unclear due to the limitations of the scope of the methodology of this survey (Table **4-7**).

Table 4-7: Relationship between Sexual Behavior and HepC

	%	CI	N
Sex with a regular female sex partner in the past 12 months			
Yes	31.6	20.8 - 44.9	86
No	19.9	14.4 - 26.0	254
Sex with non- regular female sex partner in the past 12 months			
Yes	21.0	13.8 - 28.1	156
No	24.3	18.2 - 32.3	184

	%	CI	N
Sex with female sex worker in the past 12 months			
Yes	18.6	9.5 - 30.4	81
No	23.8	18.1 - 30.5	259
Number of regular partner in the past 12 months			
None	18.9		254
1 partner	32.1		84
More than one partner	0		2
Number of non-regular partner in the past 12 months			
None	23.4		184
1 partner	22.4		76
More than one partner	18.4		80
Number of female sex workers in the past 12 months			
None	22.8		202
1 partner	16.7		57
More than one partner	21.1		81

** Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI*

Chapter 5

5 Drug Use, Needle Sharing and Treatment

Risk of HIV transmission among PWIDs is considered to be highest, primarily due to unsafe drug use and consequently needle sharing habits. An understanding of current practices among PWIDs can help to design effective intervention strategies. This chapter deals with alcohol intake, drug use, and needle sharing habits, as well as addiction treatment of PWIDs in the Kathmandu Valley.

5.1 Alcohol Consumption and Oral Drug Use

Alcohol consumption was found to be common among the PWIDs within the Kathmandu Valley. 37.1 percent of PWIDs asserted that they had not consumed alcohol in the past month. About 4.7 percent reported alcohol consumption every day within the past month whereas, 32.8 percent said that they had had an alcoholic drink more than once a week during the past month (Table 5-1).

Table 5-1: Alcohol Intake and Oral Drug Use

Alcohol used during the past month	(N=340)	%	CI
Everyday	19	4.7	2.0 - 7.1
More than once a week	94	32.8	24.4 - 36.3
Once/Less than once a week	96	25.4	19.9 - 32.6
Never	131	37.1	32.6 - 45.7

Most PWIDs claimed to prefer smoking marijuana also known as *Ganja* in Nepal and (88.3%) reported its use within the past week. Among the respondents (49.2%) reported *Chares* (better known as resin of marijuana plant) use followed by other common pharmaceutical drugs which are benzodiazepines such as Nitrosun (44.4%), Nitrovate (43.2%). Others reported use of low grade heroin i.e. Brown Sugar (14.%) followed by Proxygin (12.7%) a generic version of dextro-propoxyphene in fixed dose combination with paracetamol (Table 5-2).

Table 5-2: Types of Drugs Used Orally in the Past Week[2]

	Response	%
Types of orally used drugs *		
Ganja(Cannibis)	278	88.3
Chares (Cannibis Resin)	155	49.2
Nitrosun (Nitrazepam)	140	44.4
Nitrovate (Nitrazepam)	136	43.2
Brown sugar (crude Heroin or less pure di-acetyle morphine)	44	14.0
Proxygin (Dextropropoxyphene)	40	12.7
Combination	32	10.2
Codeine (Codeine Phosphate or Sulphate)	21	6.7
Phensydyl (Mucolytic cough syrup with codeine and ephedrine)	19	6.0
Diazepam	19	6.0

[2] Generic names of the drugs mentioned have been used as per the actual responses of the respondents. The actual chemical composition or active ingredient/chemical name have been indicated in brackets next to the generic names.

Phenergan (Promethazine)	17	5.4
White Sugar (White Heroin or di-acetyle morphine)	16	5.1
Velium 10 (Diazepam)	10	3.2
Cocaine	7	2.2
Effidin (Ephedrine)	7	2.2
Calmpose (Diazepam)	5	1.6
LSD	4	1.3
Others	51	16.2
N	**315**	

** Because of multiple responses percentage total may add up to 100.*

5.2 Drug Injecting Practice

More than one fourth of the PWIDS (27.2%) reported injecting two to three times in the past week, while 16.1 percent reported injecting four to six times. Overall, 10.7 percent claimed to inject everyday of the week. Among those respondents, who reported to have injected a day prior to the survey, 73.6 percent reported injecting once while 26.4 percent reported injecting at least two to three times a day (Table 5.3).

Table 5-3 : Drug Injecting Practice

	N=340	**%**	**CI**
Duration of drug injection (Month)			
Up to 11 months	30	8.7	5.0 - 12.5
12-24 months	70	26.1	17.9 - 31.2
25-60 months	121	33.1	26.8 - 39.8
61 + months	119	32.1	28.3 - 39.7
Mean ± Std. Dev.	**63.5±56.15**		
Median (Range)	**48 (3 – 300)**		
Frequency of drug injections within the past week			
Once a week	22	6.9	2.5 - 9.9
2-3 times a week	86	27.2	20.8 - 34.5
4-6 times a week	51	16.1	10.6 - 20.8
Once a day	46	10.7	1.6 - 15.9
2-3 times a day	41	10.9	6.8 - 16.7
4 or more times a day	3	0.7	0.0 - 1.7
Not injected in the last week	91	27.4	21.1 - 35.7
Mean ± Std. Dev.	**4.1 ± 2.077**		
Median (Range)	**4 (1 – 7)**		
Frequency of drug injection in the last day			
Once	239	73.6	67.7 - 77.9
Twice	84	22.3	18.0 - 28.6
3 or more times	17	4.1	1.7 - 6.5
Mean ± Std. Dev.	**1.4 ± 0.639**		
Median (Range)	**1 (1 – 6)**		

PWIDs within the Kathmandu Valley mostly used Diazepam (89.9%) or a combination of drugs (88.7%) (Table 5.4). They also used Phenergan (86.2%) to a certain extent, while only 13 of them used brown sugar.

Table 5-4: Types of Drugs Injected[3]

	Response	%
Drugs Injected*		
Diazepam	222	89.9
Combinations	219	88.7
Phenergan (Promethazine)	213	86.2
Calmpose (Diazepam)	20	8.1
Brown sugar (crude Heroin or less pure di-acetyle morphine)	17	6.9
Nitrosun (Nitrazepam)	13	5.3
Nitrovate(Nitrazepam)	10	4.0
Codeine (Codeine Phosphate or Sulphate)	6	2.4
Proxygin (Dextropropoxyphene)	2	0.8
Velium 10 (Diazepam)	1	0.4
Others	35	14.2
N	**247**	

** Because of multiple responses percentage total may add up to 100.*

In the past year, about 12.4 percent of the respondents said they had switched from sharing to non-sharing of needle/syringe habits, and 87.6 percent PWIDs reported never having shared a needle/syringe (Table 5-5).

Table 5-5: Switching Practice from Sharing to Non-Sharing Behavior in the Past Year

	N=340	%	CI
Switching from sharing to non sharing behavior In past year			
Yes	52	12.4	9.3 - 16.5
No	288	87.6	83.5 - 90.7

5.3 Syringe Use and Sharing Habits

Syringe use and needle sharing habits have been identified as one of the key behavioral factors as a principle driver in the transmission of HIV and other blood borne pathogens. Syringe use and needle sharing habits were assessed in terms of their last three injections. Respondents were specifically asked about the sources of the needle/syringes used in their three most recent injections. Responses provided by the PWIDs have been categorized as:

- low risk (use of new needles and syringes obtained from different places) or
- high risk (use of previously used syringes, use of needles and syringes given by friends or relatives,
- use of needles and syringes by self or others that are kept in public places)

As reflected in the table below, most of the PWIDs claimed to have consciously avoided high-risk behaviors like the use of pre-used needles and syringes in their last

[3] Generic names of the drugs mentioned have been used as per the actual responses of the respondents. The actual chemical composition or active ingredient/chemical name have been indicated in brackets next to the generic names.

three injections. Almost 99 percent of them had used a new needle that was either self-purchased or given to them by an NGO staff or friends. Only one percent of PWIDs reported to have practiced high risk injecting behavior in their three most recent injections. Most of these PWIDs had re-used needles/syringes that were used previously either by themselves or their friends/relatives. The majority of PWIDs had injected their last three injections alone. One in a hundred had shared a needle/syringe during the three most recent injections (Table 5-6).

Table 5-6: Syringe Use and Sharing Behavior during the Last Three Injections

	N=340	%	CI
Needle/syringe used; Most recent			
High risk behavior	1	0.1	0.1 - 0.3
Low risk behavior	339	99.9	99.7 - 99.9
Persons in the group using the same needle/syringe; Most recent			
1 - 2 persons	6	2.0	0.3 - 2.8
Alone	334	98.0	97.2 - 99.7
Needle/syringe used; Second Most recent			
High risk behavior	16	4.5	2.0 - 6.8
Low risk behavior	324	95.5	93.2 - 98.0
Persons in the group using the same needle/syringe; Second Most recent			
1 - 2 persons	9	2.3	0.6 - 4.5
Alone	331	97.7	95.5 - 99.4
Needle/syringe used; Third Most recent			
High risk behavior	6	1.1	0.3 - 2.1
Low risk behavior	334	98.9	97.9 - 99.7
Persons in the group using the same needle/syringe; Third Most recent			
1 - 2 persons	8	2.2	0.6 - 3.5
Alone	332	97.8	96.5 - 99.4

Data on needle/syringe using behavior in the last week as well as in the last three most recent injections indicates an increasing consciousness among current PWIDs regarding the risks associated with needle/syringe sharing. Almost all the respondents (97.6%) never used needles/syringes left in public places in the week preceding the survey. Only about 4.1 percent PWIDs reported passing their used needle/syringe to others, 3.4 percent had used somebody else's syringe, and 2.4 percent had used a syringe kept in a public place during the past week. Still, 3.8 percent of PWIDs had shared a needle/syringe with more than one partner. The PWIDs who shared their needles/syringes in the past week reported sharing them mostly with their friends (100%) (Table 5-7)

Table 5-7: Past Week's Syringe Use and Sharing Behavior

	N=340	%	CI
Used a needle/syringe that had been used by other			
Never used/Not injected	332	96.6	1.1 - 5.5
Used	8	3.4	94.5 - 98.9
Used a needle/syringe that had been kept in public place			
Never used/Not injected	332	97.6	0.7 - 4.3
Used	8	2.4	95.7 - 99.3
Gave a needle/syringe to some one			
No	329	95.9	94.3 - 98.4
Yes	11	4.1	1.6 - 5.7
Number of needle/syringe shared partners*			
None	327	96.2	
1 -2 partners	12	3.5	
Three or more partners	1	0.3	
Shared needle/syringe with friends*			
A friend	13	100.0	

** Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI*

5.4 Drug-Sharing Behavior

Among the respondents some PWIDs reported risky drug sharing practices in the past week: 3 percent reported injecting with a pre-filled syringe, 2.6 percent reported injecting with a syringe that was filled in with another drug. Moreover, 3.4 percent of the surveyed PWIDs had shared one or more pieces of injecting equipment, like a bottle, spoon, cooker, vial/container, cotton/filter, or water with others at least once in the preceding week. There were some PWIDs (4.3%) who had drawn solution from a common container used by others at least once in the previous week (Table **5-8**).

Table 5-8 : Past Week's Drugs Sharing Behavior

	N=340	%	CI
Injected with a pre-filled syringe			
Yes	15	3.0	1.3 - 5.2
No/Not injected in the past week	322	96.5	94.4 - 98.4
No Response	3	0.5	0.1 - 0.9
Injected with a syringe after drugs were transferred into it from another's syringe			
Injected with such syringe	10	2.6	0.8 - 4.4
Never injected with such syringe	329	96.8	95.0 - 99.0
No Response	1	0.4	0.0 1.5
Shared a bottle, spoon, cooker, vial/container, cotton/filter and rinse water			
Shared	12	3.4	1.2 - 5.4
Never shared	328	96.6	94.6 - 98.8

Drew drug solution from a common container used by others			
Drew at least once	18	4.3	2.1 - 6.4
Never	322	95.7	93.6 - 97.9

Almost 88 percent PWIDs reported injecting in the last month. Among them, a majority of PWIDs in Kathmandu (96%) reported to not have injected with previously used non-sterile needles/syringes in the past months; however, the remaining 4 percent were still using such needles/syringes in the past months. Similarly, 4.3 percent had used non-sterile injecting equipment in the past months (Table 5-9.)

Table 5-9: Needle/Syringe and Injecting Equipment Used in the Past Months

	N=340	%	CI
Injected in the last month			
Yes	301	87.8	82.8 - 91.8
No	39	12.2	8.2 - 17.2
Used previously used non-sterile needle/syringe in the past month	**N=301**		
Yes	12	4.0	1.6 - 6.3
No	289	96.0	93.7 - 98.4
Used non-sterile injecting equipments at any time in the past month			
Yes	14	4.3	1.7 - 7.2
No	287	95.7	92.8 - 98.3

Information on the mobility of PWIDs both within and outside the country along with their injecting practices in the place/s they visited was also collected during this survey. About 22 percent reported injecting drugs in different places of the country as well as out of the country. These places included both cities outside the Kathmandu Valley but still in Nepal or outside of the country altogether. Among the PWIDs in the sample who had injected drugs outside the Kathmandu Valley or outside of the country, 5.2 percent had injected with someone else's previously used syringe while 82.6 percent had never injected with someone else's previously used needle/syringe. (Table 5-10).

Table 5-10 : Injecting Behavior in Other Parts of Country and Out of Country

	N=340	%	CI
Injected in other parts of country as well as out of country			
Yes	85	22.2	17.7 - 28.1
No	255	77.8	71.9 - 82.3
Used a needle/syringe that had been used by other	**N=85**		
Yes	3	5.2	0.0 - 34.5
No	82	94.8	65.5 - 100.0
Used a needle/syringe that had been used by other			
Sometimes – always	3	17.4	3.5 - 25.3
Never	82	82.6	74.7 - 96.5

5.5 Needle/Syringe Cleaning Practices

Improper methods of cleaning not only reflect a lack of awareness but also put PWIDs at a higher risk for contracting HIV. In the Kathmandu Valley, 7.5 percent of PWIDs reported using re-used needles/syringes in the past week. All of the PWIDs reported cleaning the needle/syringe with other methods (Table 5-11).

Table 5-11: Needle/Syringe Cleaning Practice

	N=247	%	CI
Cleaned previously used needle/syringe in the past week			
Yes	19	7.5	3.9 - 13.3
No	5	3.0	0.5 - 4.2
Never reused	223	89.5	84.5 - 94.2
Cleaned previously used needle/syringe in the past week	**N=19**		
without bleach	17	100.0	100.0-100.0
Bleach	2	0.0	0.0 - 0.0

5.6 Availability of New Syringes

While investigating the availability and access to clean needles and syringes, a total of 95.9 percent of PWIDs reported that they knew that they could obtain new needles/syringes from various sources. Among them, nearly all stated they could get a new needle/syringe from a drugstore (92%). A little over half of PWIDs (58%) knew they could obtain new syringes from the needle exchange programs, while 12.6% mentioned hospitals and a few mentioned friends (16%) as a source of new needles/syringes. 49.9 percent of the PWIDs reported that they received new syringes through needle exchange programs or from an outreach worker/peer educator in the past year (Table 5-12).

Table 5-12: Knowledge of Sources of New Syringes

	N=340	%	CI
Could obtain new syringe			
Yes	326	95.9	93.9 - 98.2
No	14	4.1	1.8 - 6.1
Could obtain syringe from*	**N=326**		
Drugstore	300	92.0	
Needle exchange program	189	58.0	
Friends	52	16.0	
Hospital	41	12.6	
Drug wholesaler/drug agency	22	6.7	
Health worker	10	3.1	
Drug seller	5	1.5	
Other drug users	2	0.6	
Other shop	2	0.6	
Family/ relatives	1	0.3	
Others	12	3.7	

Given a new needles/syringes by outreach worker/peer educators or obtained from needle exchange program in the past year	N=340		
Yes	197	49.9	46.0 - 60.6
No	143	50.1	39.4 - 54.0

** Because of multiple responses percentage total may add up to 100*

5.7 Treatment Status

Regarding Treatment status and attempts at drug treatment, the majority of the PWIDs (74.4%) reported to not have received any kind of treatment so far. Among those who had received some treatment, more than one third (36%) had done so less than a year ago, whereas the rest reported being treated more than a year ago (Table 5-13).

Table 5-13: Treatment Received

	N=340	%	CI
Treatment status			
Ever treated	111	25.6	24.1 - 35.8
Never treated	229	74.4	64.2 - 75.9
Last treatment received *	**N=111**		
Less than 6 months	30	27.0	
6-11 months before	10	9.0	
12-23 months before	24	21.6	
24-35 months before	25	22.5	
36-47 months before	6	5.4	
48 or more months before	16	14.4	

** Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI*

Chapter 6

6 Sexual Behavior and Condom Use

Sexual behavior and condom use is a key factor in determining safe sexual practices especially among key affected populations and especially those most at risk such as PWIDs. In this chapter the sexual behavior of the respondents and their sex partners has been analyzed. HIV transmission among drug users is most often associated with their needle/syringe-sharing behavior. In addition, the practice of risky sexual behavior contributes greatly towards the vulnerability for transmission of the virus to their spouses or sex partners through unsafe sexual contact. This chapter also discusses sexual history and condom use among PWIDs.

6.1 Sexual Behavior

Based on our findings the majority of PWIDs within the geographical areas of research were found to be sexually active. Among the respondents 94.8 percent reported having had at least one sexual experience in the past, while 91.4 percent of them reported that they had sexual experience before marriage. Further, within the past twelve months 74.5 percent reported having sexual contact. Among those who were sexually active, a high proportion (81.4%) were less than the age of 20 at the time of their first sexual contact, and the mean age was 17.4 years for this group. Among those that reported having sex in the past 12 months, almost half the respondents (49.1%) claimed having sex with only one regular partner or being in a monogamous relationship as indicated by the data below. On the other hand, 7.7 percent of PWIDs reported having sex with as many as or more than seven partners in the course of the year preceding the survey (Table 6-1).

Table 6-1: Sexual History

	N=340	**%**	**CI**
Ever had sexual intercourse			
Yes	325	94.8	92.2 - 97.7
No	15	5.2	2.3 - 7.8
Age at first sexual intercourse	**N=325**		
Below 20 years	269	81.4	75.0 - 86.6
20 years & above	56	18.6	13.4 - 25.0
Mean	**17.4**		
Pre marital sex			
Yes	313	91.4	87.7 – 94.7
No	27	8.6	5.3 – 12.3
Sexual intercourse in the past 12 months			
Yes	248	74.5	69.0 - 80.2
No	77	25.5	19.8 - 31.0
Numbers of different sexual partners in the past 12 months	**N=248**		
1 partner	111	49.1	41.4 - 57.0
2–3 partners	71	26.2	17.3 - 35.4
4–6 partners	48	17.0	10.6 - 24.6
Seven and more partners	18	7.7	1.9 - 14.0

During the course of this survey, investigations into the frequency of sex within the last 12 months as well as the last month, prior o the survey, with regular partners was explored. The table below summarizes the data on regular female sex partners.

Only 22.1 percent of the PWIDs reported sex with a regular partner in the last 12 months, all of whom reported sex with only one regular partner (100%). In the month preceding the survey 82.6 percent claimed to have had sex with a regular partner ranging from 1-4 times within the past month (45.7%) (Table 6-2).

Table 6-2: Sexual Intercourse with Regular Female Sex Partners

	N=325	%	CI
Sex with a regular female sex partner in the past 12 months			
Yes	86	22.1	18.2 - 28.1
No	239	77.9	71.9 - 81.8
Number of regular partner in the past 12 months	**N=86**		
1 partner	84	100.0	-
Two partners	2	0.0	-
Sex with a regular female sex partner in last month			
Yes	78	82.6	27.7 - 100.0
No	8	17.4	0.0 - 72.3
Frequency of sex with last regular female sex partner during last month	**N=78**		
1-4 times	33	45.7	9.8 - 79.6
Five and more times	45	54.3	20.4 - 90.2

When respondents were asked about sex with non-regular female partners, a different pattern was observed. For the purpose of this survey, the definition of "non-regular partner" included sex partners who were neither spouses of the respondents nor live-in partners with whom there was no exchange of money or drugs for sex.

Slightly above 48 percent of PWIDs reported having had sex with non-regular female sex partners within the past 12 months. Among them, 48.7 percent had one partner, while 51.3 percent had had more than one partner. About 82percent of them reported their most recent sex with a non-regular female partner in the month prior to the survey (Table 6-3).

Table 6-3 : Sexual Intercourse with Non-Regular Female Sex Partners

	N=325	%	CI
Sex with non- regular female sex partner in the past 12 months			
Yes	156	48.5	41.7 - 54.5
No	169	51.5	45.5 - 58.3
Number of non-regular partner in the past 12 months *	**N=156**		
1 partner	76	48.7	
More than one partner	80	51.3	
Sex with non-regular female sex partner in last month			
Yes	109	82.4	66.8 - 88.0
No	47	17.6	12.0 - 33.2

Frequency of sex with last non-regular female sex partner during last month	N=109		
1-4 times	81	85.2	77.4 - 97.5
Five and more times	28	14.8	2.5 - 22.6

** Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI*

In order to make an in-depth examination of the sexual behavior of PWIDs, the respondents were asked if they had ever maintained sexual relations with a female sex worker. In this context, for the purposes of this survey "female sex workers" were defined as those who were involved in the exchange for money or drugs.

Among the respondents, 23.1 percent reported sex with an FSW during the past 12 months. Among them 70.4 percent reported sex with at least two or more paid partners in the past year, and almost half of them (49.2%) had had sex in the month prior to the survey (Table 6-4).

Table 6-4: Sexual Behavior with Female Sex Worker

	N=325	%	CI
Sex with female sex worker in the past 12 months			
Yes	81	23.1	17.6 - 27.8
No	244	76.9	72.2 - 82.4
Number of female sex workers in the past 12 months *	**N=81**		
1 partner	24	29.6	
More than one partner	57	70.4	
Sex with female sex workers in last month			
Yes	40	49.2	37.6 - 82.5
No	41	50.8	17.5 - 62.4

** Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI*

6.2 Sources of Condoms

Availability and access to safe sex commodities such as condoms is a vital element to promote safe sexual practices, especially among PWIDs and their sexual partners. Knowledge regarding availability and access to condoms was explored by the survey. Respondents were asked if they knew how or where they would be able to obtain condoms. All respondents cited knowledge of at least one source. Among them, 97.1 percent said that they could obtain condoms from a pharmacy. Other common sources of condoms mentioned were hospitals (35.3%), peer educators/outreach workers (48.5%), NGOs (12.1%), retail shops (18.8%), *paanpasal*[4] (26.5%) and clinics (13.8%). Almost all (99.4%), said that they could acquire condoms, if necessary, within less than 30 minutes, indicating mostly that condoms were readily available and easy to access at these sources. About 15.6 percent of the respondents reported that generally, they often carried condoms themselves. However, only 5.2 percent were able to present a condom or condoms during the interview (Table 6.5).

[4]Small betel nut vendors

Table 6-5: Sources of Condom and Time to Acquire them

Sources of Condoms and Time to Acquire them	N=340	%	CI
Place/person from where condom can be obtained #			
Pharmacy	330	97.1	
Peer Educator/outreach educator	165	48.5	
Hospital	120	35.3	
Paan Pasal [2]	90	26.5	
Retail Shops	64	18.8	
Clinic	47	13.8	
NGOs (DIC/HTC)	41	12.1	
Friend	15	4.4	
Health worker	13	3.8	
Family planning center	13	3.8	
Bar/Guest house/Hotel `	10	2.9	
Time taken to obtain condom *			
Less than 30 minutes	338	99.4	
More than 30 minutes	2	0.6	
Respondent mostly carry condom			
Yes	62	15.6	10.9-20.4
No	278	84.4	79.6-89.1
Number of condom carried now			
None	322	94.7	92.6-98.0
One	9	2.0	0.4-3.3
Two and more	9	3.3	0.9-5.1

 # Because of multiple responses percentage total may add up to 100

** Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI*

6.3 Sources of Information about Condoms

Regarding Information on availability and access to condoms, sources of information play a practical role in promoting awareness to enable informed choices. The survey explored knowledge of sources of information about condoms to understand the levels of awareness about where and how to obtain information about condoms from different sources. The common sources of information for most of the respondents were seen to be pharmacies (93.8%), television (92.4%), newspapers/posters (85.9%), and bill boards/signs/postings (76.5%). A more comprehensive list of other sources of information identified by the respondents has been illustrated in the Table 6-6 below.

Table 6-6: Sources of Information about Condoms

	N	%
Sources of Information about Condoms *		
Pharmacy	319	93.8
Hospital	319	93.8
TV	314	92.4
Health post	300	88.2
Friends/neighbors	299	87.9

	N	%
Sources of Information about Condoms *		
Radio	296	87.1
Newspapers/posters	292	85.9
Health centers	290	85.3
bill boards/signs/postings	260	76.5
Health workers/volunteers	255	75.0
NGO workers	240	70.6
Community worker	181	53.2
Community event/training	157	46.2
Cinema hall	151	44.4
Comic books	149	43.8
Street drama	122	35.9
Video van	85	25.0
Internet (face book/Google)	3	0.9
N	**340**	

** Because of multiple responses percentage total may add up to 100*

6.4 Condom Using Behavior with Different Female Sex Partner

Although information, availability and access to condoms, all play key roles in promoting safe sexual behaviors, from a practical standpoint, the actual utilization of such commodities is critical to ensure that safe sexual practices are being implemented on a personal level. The survey explored the practice of actually using condoms among PWID. Among the respondents, this was found to vary at different levels with different types of female sex partners within the past year.

Among the respondents who reported sexual intercourse with a regular female sex partner within the past 12 months, 27 percent reported the use of a condom with a regular sex partner during the last sex act. However, consistent use of condom with regular female sex partner was found to be at only 14.9 percent.

Similarly, among the respondents who reported sexual intercourse with a non-regular female sex partner within the past 12 months, more than half of them (53.3%) reported that they had used a condom with non-regular sex partners during the last sex act, while 39 percent reported the consistent use of condoms.

In addition, among the respondents who had reported sex with a female sex worker within the past 12 months, all (100%) of the subjects reported the use of condoms during the last sex with a female sex worker. Likewise, about 76.6 percent reported using condoms consistently with female sex workers within the past 12 months (Table 6-7**Error! Reference source not found.**).

Table 6-7: Condom using behavior with different Female Sex Partners

	N=86	%	CI
Condom use with regular female sex partner during the last sex			
Yes	26	27.0	9.7 - 37.2
No	60	73.0	62.8 - 90.3
Consistent condom use with regular female sex partner in the past 12 months			
Yes	12	14.9	2.2 - 24.1
No	74	85.1	75.9 - 97.8

Condom use with non-regular female sex partner during the last sex	**N=156**		
Yes	86	53.3	37.1 - 66.8
No	70	46.7	33.2 - 62.9
Consistent condom use with non-regular female sex partner in the past 12 months			
Yes	60	39.0	24.2 - 56.4
No	96	61.0	43.6 - 75.8
Condom use with female sex worker during the last sex	**N=81**		
Yes	67	100.0	-
No	14	0.0	-
Consistent condom use with female sex worker in the past 12 months			
Yes	56	76.6	29.2 - 95.0
No	25	23.4	5.0 - 70.8

Chapter 7

7 Knowledge about STIs and HIV/AIDS

In many cultures such as in Nepal, the dissemination of knowledge about STIs and HIV and AIDS may be due to shame or embarrassment. The Social perceptions towards HIV testing and counseling (HTC) as well as knowledge and familiarity about the availability of HIV testing facilities also play a critical role in dealing with the HIV epidemic from a public health perspective. This chapter explores the levels of knowledge about STI and HIV and AIDS among PWIDs within the Kathmandu Valley as well as the respondents' levels of awareness regarding ways in which HIV is transmitted and routes of transmission. The acceptability of information about the availability of HIV testing facilities and perceptions of HIV testing are also covered in this chapter.

7.1 Knowledge about STIs

All the respondents were asked about ever heard about STI. Overall, little more than three fourth (75.6%) of them reported that they have ever heard of it. Among the respondents, PWIDs who had heard of STIs were seen to hold a general understanding of male and female STI symptoms. The respondents cited the most commonly recognized symptoms as genital ulcers/sores blister (with 54% females and 68.3% males claiming to recognize these as STI symptoms) and genital discharge (47.2% in female and 54% in male recognizing these STI symptoms). Symptoms like foul smelling discharges (43.0%) and abdominal pain (12.5%) were specifically mentioned as female specific STI symptoms by some of the PWID respondents. Similarly, burning sensations during urination was recognized as a male STI symptom by 42.6 percent of the PWID respondents (Table 7-1).

Table 7-1: Knowledge about STI Symptom

	N=340	%	CI
Ever heard about STI			
Yes	265	75.6	69.3-81.3
No	73	23.5	18.1-29.9
No response	2	0.9	0.0-2.3
Female STI Symptoms*			
Genital ulcers/sore	143	54.0	
Genital discharge	125	47.2	
Foul smelling	114	43.0	
Itching	83	31.3	
Burning pain on urination	66	24.9	
Abdominal pain	33	12.5	
Swelling in groin area	27	10.2	
Become thin	3	1.1	
Fever	1	0.4	
Don't know	63	23.8	
N	**265**		

Male STI Symptoms*			
Genital ulcers/sore blister	181	68.3	
Genital discharge	143	54.0	
Burning pain on urination	113	42.6	
Swellings in groin area	51	19.2	
Itching	43	16.2	
Fever	1	0.4	
Don't know	49	18.5	
N	**265**		

** Because of multiple responses percentage total may exceed 100%*

All respondents were asked if they had ever experienced symptoms like genital discharges and/or genital ulcers/sores within the past year. Overall, 88.8 percent reported that they had never experienced any STI symptoms, 4.9 percent said that they had experienced genital discharge in the past year, while only five PWIDs mentioned that they had had genital ulcers/sores in the past year.

Among respondents who reported genital discharges in the past year, 7.6 percent reported currently experiencing genital discharges at the time of the survey. Among respondents who had had genital ulcers/sores the past year, 30.6 percent, reported having those symptom currently at the time of survey (Table 7-2).

Table 7-2: STI Symptom/s Experienced in the Past Year

	N=340	**%**	**CI**
Had genital discharge in the past year			
Yes	20	4.9	2.4 - 7.2
No	320	95.1	92.8 - 97.6
Had genital ulcer/sore blister in the past year	**N=20**		
Yes	5	0.0	-
No	15	100.0	-
Currently had genital discharge	**N=340**		
Yes	28	7.6	4.5 - 9.9
No	311	91.8	89.4 - 94.8
Don't know	1	0.6	0.4 - 1.7
Currently had genital ulcer/sore blister	**N=28**		
Yes	9	30.6	0.0 - 67.1
No	19	69.4	32.9 - 100.0

About one among ten of the respondents (11.0%) reported to have experienced STI symptoms in the past year but had not sought any treatment so far. Out of those that had sought treatment, 59.8 percent reported going to a private doctor and 40.2 percent reported visiting a hospital for treatment (Table 7.3).

Table 7-3: STI Symptom Experienced and Treatment Sought in the Past Year

	N=340	%	CI
STI experienced in the past year			
Yes	38	11.0	6.8 - 13.6
No	302	89.0	86.4 - 93.2
STI treatment sought in the past year	**N=38**		
Yes	17	59.8	0.0 - 100.0
No	21	40.2	0.0 - 100.0
Source of treatment in the past year	**N=17**		
Private Doctor	12	59.8	0.0 - 100.0
Hospital	5	40.2	0.0 - 100.0
Source of treatment during last STI symptoms experienced	**N=340**		
Not treated	16	3.5	1.5 -5.1
Private Doctor	17	2.3	0.8 - 3.4
Hospital	9	2.2	0.7 - 3.7
Never STI symptoms	293	88.2	86.1 - 92.8
NGOs	5	3.8	1.0 - 6.1

7.2 Knowledge about HIV and AIDS

All the respondents reported having heard about HIV and AIDS before. A good proportion of them (60.4%) reported knowing someone who had either died due to AIDS or currently carrying HIV. When asked about their relationship to those who were known by them to be HIV positive, had lost their lives because of AIDS, 14.9 percent reported that they had been close relatives and 59.3 percent said that they had been close friends (Table 7-4).

Table 7-4: Awareness HIV/AIDS

	N=340	%	CI
Know anyone who has HIV/AIDS/died due to AIDS			
Yes	220	60.4	54.2-67.4
No	120	39.6	32.6-45.8
Nature of relationship with the person living with HIV/AIDS /died due to AIDS	**N=220**		
Yes, a close relative	37	14.9	6.4-18.8
Yes, a close friend	121	59.3	53.7-72.2
None of above	62	25.8	16.7-32.5

Almost two fifths of the respondents (39.2%) reported knowing at least one PWID who has died over the past year, while 22.4 percent knew of deaths of 2 or more PWIDs (Table 7-5).

Table 7-5: Number of Known PWIDs Died in the Past Year

	N=340	%	CI
Known IDUs died in the past one year			
None	183	53.8	41.9 – 62.4
One	57	16.8	13.4 – 22.3
Two	36	10.6	3.3 – 18.7
Three and more	40	11.8	2.1 – 22.3
Don't know	24	7.1	1.0 – 13.5

Knowledge about ways in which HIV is transmitted was further analyzed among the respondents with the help of some questions regarding the prevention of HIV/AIDS. In this regard understanding of the three major HIV/AIDS prevention measures including (A) abstinence from sex; (B) being faithful to one sex partner; and (C) regular condom use was assessed. In total, 31.6 percent of the respondents were aware of all three knowledge indicators. Fewer respondents were aware that abstinence from sex (42.4%) could prevent HIV as compared to those who were aware of sexual faithfulness (80.7%) as another measure, and (77.7%) asserted the use of condoms regularly as a preventive measure.

Additionally, 86.6 percent were aware of the possibility of a healthy looking person being infected with HIV (D). A large majority of the respondents (93.7%) knew that sharing meal with an HIV infected person would not put them at risk of contracting the virus (F). However, a relatively low proportion of respondents (20.7%) believed that a person could not contract HIV virus from mosquito bites (E). In total, 49.4 percent of PWIDs seemed adequately aware of all the five major indicators (B, C, D, E and F; excluding abstinence.) (Table 7-6).

Table 7-6: Knowledge of Major Ways of Avoiding HIV/AIDS

	N=340	%	CI
A: Abstinence from sexual contact			
Yes	145	42.4	35.7 - 49.0
No	193	57.5	51.0 - 64.1
Don't know	2	0.1	0.0 - 0.3
B: Being faithful to one partner			
Yes	286	80.7	77.1 - 86.8
No	51	18.9	12.8 - 22.4
Don't know	3	0.5	0.1 - 1.0
C: Condom use during each sexual contact			
Yes	283	77.7	73.6 - 84.8
No	55	21.9	14.8 - 26.1
Don't know	2	0.4	0.1 - 0.8
D: A healthy-looking person can be infected with HIV			
Yes	298	86.6	83.5 - 91.4
No	35	12.4	7.6 - 15.5
Don't know	7	1.1	0.2 - 2.1

E: A person cannot get the HIV virus from mosquito bite			
Yes	65	20.7	13.4 - 23.5
No	248	73.4	69.5 - 80.7
Don't know	23	5.3	2.8 - 9.8
No response	4	0.7	0.0 - 1.5
F: Sharing a meal with an HIV infected person transmit HIV			
Yes	17	5.8	2.6 - 8.6
No	321	93.5	90.6 - 96.7
Don't know	2	0.7	0.2 - 1.9
Knowledge of all three ABC			
Yes	113	31.6	26.6 - 38.8
No	227	68.4	61.2 - 73.4
Knowledge of all five BCDEF			
Yes	177	49.4	44.9 - 58.1
No	163	50.6	41.9 - 55.1

An in-depth understanding on the various modes of transmission was further assessed with the help of probing questions. Ninety nine percent were of the view that a person could contract the virus HIV through the use of a previously used needle/syringe. A large number of respondents said that HIV could be transmitted through the transfusion of blood from an infected person (98.2%), and (5.3%) knew that a person could not contract the HIV virus by holding the hand of a person infected with HIV. A considerable proportion of respondents held the view that a drug user could protect himself from HIV by switching to non-injecting drugs (70%). Many of the respondents (71.5%) perceived that a pregnant woman with HIV could transmit the virus to her unborn child. A relatively lower percentage of respondents (43.2%) believed that women with HIV could transmit the virus to her new born child through breast-feeding (Table 7-7).

The respondents, who held the view that an HIV infected pregnant woman was capable of transmitting the virus to her unborn child, all were asked if they were aware of any measures that could reduce the risk of such transmission. Only one third of the respondents suggested that the expectant mother could take medicines or antiretroviral treatment. A majority (57.1%) were unaware of any measures to prevent the transmission of infection to unborn infants through pregnant women (Table 7-7).

Table 7-7: Knowledge about Modes of HIV/AIDS Transmitting

	N=340	**%**
Statements related to HIV/AIDS *		
A person can get HIV by using previously used needle by others	337	99.1
Blood transfusion from an infected person to the other transmit HIV	334	98.2
A pregnant woman infected with HIV/AIDS can transmit the virus to her unborn child	243	71.5
An IDU can protect themselves from HIV/AIDS by switching to non-injecting drugs	238	70.0

A woman with HIV/AIDS can transmit the virus to her new-born child through breast feeding	147	43.2
A person cannot get HIV by holding an HIV infected person's hand	18	5.3
N	**340**	
Ways by which a pregnant woman can reduce the risk of transmission of HIV to her unborn child *	**N=268**	
Take medication (Antiretroviral)	89	33.2
Take doctor's advice	26	9.7
Don't know	153	57.1

** Because of multiple responses percentage total may add up to 100*

7.3 Knowledge about HIV Testing Facilities

The respondents were asked about their awareness of the availability of confidential HIV testing facilities and clinics allowed people to get an HIV test promptly without the fear of being exposed (maintaining confidentiality). Although a good proportion of PWIDs (86.3%) exhibited awareness of the existence of such facilities in their communities, 46.9 percent of respondents had themselves never been tested for HIV, while the rest (53.1%) reported having had an HIV test in the past. Among them, 76.1 percent claimed to have been tested voluntarily and consensually. A large majority (97.5%) reported to have received their test results. However, only 44.2 percent of PWIDs had had an HIV test within the last year. The remainder of the respondents (55.8%) of the respondents reported having had an HIV test more than a year ago (Table 7-8).

Table 7-8: Knowledge about HIV Testing Facilities and History of HIV Test

	N=340	%	CI
A confidential HIV testing facility available in the community			
Yes	296	86.3	83.0 - 91.0
No	34	12.1	7.7 - 15.5
Don't know	10	1.5	0.5 - 2.6
Ever had HIV test			
Yes	195	53.1	48.0 - 60.4
No	145	46.9	3.96 - 52.0
Types of test taken	**N=195**		
Voluntary	147	76.1	68.4 - 86.3
Required	48	23.9	13.7 - 31.6
Test result received			
Yes	191	97.5	94.4 - 99.6
No	4	2.5	0.4 - 5.6
Timing of last HIV test			
Within the past 12 months	98	44.2	36.6 - 56.8
Between 13-24 months	52	30.5	16.6 - 34.4
Between 25-48 months	22	12.3	7.0 - 20.7
More than 49 months	22	13.0	7.9 - 22.2
No response	1	0.0	-

7.4 Source of Information about HIV and AIDS and Condom

The survey also focused on exploring sources and of knowledge and information related to HIV and AIDS. Focusing in on the past year, the respondents reported having received HIV and AIDS related IEC materials from different sources. Among those receiving IEC materials, 57.4 percent said that they had received HIV related information, 50.1 percent received published materials such as brochures/booklet/pamphlets on HIV and AIDS and 47 percent said that they had received commodities and resources such as condoms and/or information related to condoms.

Table 7-9: Information/Materials Received during the Past Year

	N=340	%	CI
Received information on Condom			
Yes	166	47.0	41.6 - 53.0
No	174	53.0	47.0 - 58.4
Received brochures/booklets/pamphlets on HIV/AIDS			
Yes	169	50.1	44.0 - 56.8
No	171	49.9	43.2 - 56.0
Received information on HIV and AIDS			
Yes	202	57.4	52.9 - 65.1
No	138	34.9	34.9 - 47.1

7.5 Perception and Attitude towards HIV and AIDS

The stigma associated with HIV and AIDS has the potential to negatively affect society in general and can increase the detrimental impact of HIV on patients as well, on most at risk and vulnerable populations. Stigma-related violence or the fear of violence prevents many people from seeking HIV testing, returning for their results, or securing treatment, possibly

The perception of the respondents towards HIV infected persons and the stigma associated with the disease was examined with the help of series of structured queries. The majority of respondents said that they were prepared to care for male relative (95.7%) or a female relative (95.1%) who were HIV positive in their homes if such a need arose. However, 79.4 percent of the sample population had certain reservations and asserted that if a family member had HIV, they would prefer to keep it a secret and not talk about it with others.

The majority of participants, (89.7%) said that they would readily buy food from an HIV - positive vendor. Around 96.9 percent agreed that, unless very sick, people with HIV and AIDS should be allowed to continue in their jobs.

When asked about the health care needs of HIV infected persons, 49 percent the respondents maintained that the same level of care and treatment should be provided as necessary for chronically ill patients as for non HIV patients. Additionally, 43 percent believed that HIV infected persons had additional health care needs as compared to those people suffering from chronic diseases (Table 7-10).

The question of attitude is one of the greatest and perhaps the most crucial related to HIV and AIDS. Attitude refers the way of thinking, of behavior and personal opinions

relating to specific issues. When applied to HIV and AIDS it refers to how we perceive individuals living HIV and AIDS in terms of our personal thinking. These attitudes or opinions stem from the values and morals that have been instilled in us, inherited from our parents, teachers' peers and society as well as culture in general, developed over a period of time. They stem from our upbringing and are based on principles influenced by the environment we exist in. Attitudes can also be influenced by Personal, Religious, Cultural, Legal and Environmental factors and most importantly can be instigated by further propagated by Health Policy.

Table 7-10: Attitude towards HIV AND AIDS

	N=340	%	CI
Willing to take care of HIV positive male relative in the household			
Yes	331	95.7	92.6 - 98.7
No	8	3.7	1.2 - 6.5
Don't know	1	0.6	0.0 - 1.8
Willing to take care of HIV positive female relative in the household			
Yes	330	95.1	92.3 - 98.3
No	9	4.3	1.5 - 6.7
Don't know	1	0.6	0.0 - 1.9
Willing to maintain confidentiality of a HIV positive family member			
Yes	270	79.4	63.2 – 86.1
No	67	19.7	11.3- 23.4
Don't know	3	0.9	0.0 – 10.3
Willing to buy food from HIV infected shopkeeper			
Yes	329	89.7	82.7 - 96.6
No	10	6.4	2.1 - 10.8
Don't know	1	0.4	0.6 - 7.4
HIV infected person should get the same, more or less health care than someone with any other chronic disease			
Same	178	49.0	46.3 - 58.3
More	142	43.0	35.0 - 47.1
Less	18	7.6	3.4 - 9.6
Don't know	2	0.4	0.0 - 1.1
HIV infected person should be allowed to continue working together			
Yes	331	96.9	95.8 - 99.0
No	9	3.1	1.0 - 4.2
HIV infected students can study together in the class with other uninfected students			
Yes	328	96.2	93.8 - 98.4
No	12	3.8	1.6 - 6.2

Chapter 8

8 Exposure to HIV and AIDS Awareness Programs

The exposure of the PWIDs to the ongoing HIV/AIDS awareness programs and their participation in these activities has also been examined by the survey. Respondents were asked several questions relating to some of the most important components of the current HIV/AIDS-related programs run by different organizations, including related donors and stakeholders in Nepal.

8.1 Peer/Outreach Education

The peer/outreach education component consists of activities that involve the mobilization of peer educators (PEs) and outreach educators (OEs) to carry out awareness raising activities at the community level. They meet the target groups and hold consultations on HIV/AIDS, safe injecting practices, safe sex and other related topics. They also distribute IEC materials, condoms, and refer the target group to drop-in centers and STI treatment services. Some also carry new sterile needles/syringes for distribution among the PWIDs.

The survey indicated that almost half the participants (47.4%) had met with one PE/OE at least once prior to the survey. During their meetings, 47.7 percent had discussed safe injecting behaviors, while 90.7 percent had been taught about how HIV is transmitted. 19.8 percent of PWIDs discussed how STI is transmitted.

Among the respondents, 52.7 percent had met with PE or OE more than 12 times in last 12 months, while 2.9 percent of the PWID respondents had met with PE or OE only once (Table 8-1).

Table 8-1: Meeting with Peer Educators and Outreach Educators in the Last 12 Months

	N=340	%	CI
Met or discussed or interacted with PE or OE in the last 12 months			
Yes	172	47.4	42.0 - 55.4
No	168	52.6	44.6 - 58.0
Activities carried out with OE/PE*	**N=172**		
Discussion on how HIV/AIDS is/isn't transmitted	156	90.7	
Discussion on safe injecting behavior	82	47.7	
Regular/non-regular use of condom	56	32.6	
Demonstration on using condom correctly	41	23.8	
Discussion on how STI is/isn't transmitted	34	19.8	
Others	9	5.2	
Number of meeting with PE or OE			
Once	7	2.9	0.2 - 7.4
2-3 times	29	18.0	10.0 - 24.7
4-6 times	28	15.5	9.3 - 24.4
7-12 times	10	8.8	1.8 - 12.1
more than 12 times	97	52.7	44.0 - 67.0
No response	1	2.1	0.0 - 5.2

** Percentage total may exceed to 100% because of multiple responses*

8.2 Drop-in-Center

In the past 12 months 57.7 percent of PWIDs had visited DIC/IC/CCs. A majority of the respondents (90.7%) went to such centers for a new syringe while 6.5 percent had participated in discussions on HIV transmission. Only 5 respondents (3.8%) had visited a DIC/IC/CC only once in past 12 months while 63.5 percent of the PWID respondents had been to DICs more than 12 times in a year (Table 8-2).

Table 8-2: DIC Visiting Practices in the Last 12 Months

	N=340	%	CI
Visited DIC/IC/CC in the last 12 months			
Yes	216	57.7	53.6 - 66.5
No	124	42.3	33.5 - 46.4
Participated activities at DIC/IC/CC *	**N=216**		
Went to have new syringe	196	90.7	
Went to collect condoms	69	31.9	
Went to learn about the safe injecting behavior	39	18.1	
Participated in discussion on HIV transmission	14	6.5	
Went to learn the correct way of using condom	11	5.1	
Went to watch film on HIV/AIDS	9	4.2	
Others	25	11.6	
Number of visits to the DIC/IC/CCs			
Once	5	3.8	0.6 - 4.9
2-3 times	28	14.2	7.1 - 21.3
4-6 times	23	11.6	5.2 - 17.6
7-12 times	19	0.7	2.2 - 10.5
more than 12 times	141	63.5	58.1 - 75.1

** Percentage total may add up to 100 because of multiple responses*

8.3 HIV Testing and Counseling (HTC) Centers

HTC centers form an integral part of the HIV/AIDS prevention programs. These facilities provide HIV and AIDS and STI testing services and offer pre- and post-test counseling. Moreover, information related to safe injecting practices, HIV/AIDS and STI transmission, treatment facilities are also provided at these centers.

A majority of the PWIDs (80.2%) had not visited HTC center in the last 12 months. Among the PWID respondents who had visited an HTC center, most of them (92.5%) visited an HTC center for HIV testing. More than three fifths (62.5%) received information on safe injecting behavior while 80 percent received pre-HIV test counseling and 72.5 percent received post HIV test counseling. Among the respondents 30.5 percent of PWIDs had visited an HTC center at least once in the last 12 months, while 14.8% of respondents had visited HTC centers more than 12 times a year (Table 8-3).

Table 8-3: HTC Center Visiting Practices in the Last 12 Months

	N=340	%	CI
Visited HTC center in the last 12 months'			
Yes	80	19.8	17.2 - 27.0
No	260	80.2	73.0 - 82.8
Participated activities at HTC center *	**N=80**		
Blood sample taken for HIV/AIDS test	74	92.5	
Received pre-HIV/AIDS test counseling	64	80.0	
Received post HIV/AIDS test counseling	58	72.5	
Received HIV/AIDS test result	54	67.5	
Received information on safe injecting behavior	50	62.5	
Received counseling on using condom correctly in each sexual intercourse	4	5.0	
Took a friend with me	3	3.8	
Received information on HIV/AIDS window period	2	2.5	
Others	2	2.5	
Number of visits to the HTC centers	**N=80**		
Once	29	30.5	11.2 - 69.6
2-3 times	27	20.7	3.8 - 39.0
4-6 times	10	10.5	0.0 - 24.7
7-12 times	3	23.5	0.0 - 37.0
more than 12 times	11	14.8	0.0 - 37.6

** Percentage total may add up to 100 because of multiple response*

8.4 Opioid Substitution Therapy (OST)[5]

All of the respondents were asked whether they ever received any Opioid Substitution Therapy. Overall, 7.1 percent of them reported to have had ever received OST. Among the PWIDs respondents, about 50 percent (N=44) of PWIDs had received some type of Opioid substitution Therapy (OST) in the past 12 months. Among them, 50 percent had received methadone maintenance services and rest had received Buprenorphine substitution services. A number of respondents (21 PWIDs) reported being currently in therapy receiving either methadone or Buprenorphine. About 10 percent of the PWID respondents said that they were receiving 10 mg Methadone per day and 19 percent said that they had been receiving 1.5-2 mg Buprenorphine per day. About 29 percent of them reported that they had been currently receiving OST therapy ranging from a period of 1-3 months (Table 8-4).

Table 8-4: OST Therapy

	N=340	%	CI
Ever received any Opioid substitution Therapy (OST)			
Yes	44	7.1	5.5 - 12.6
No	191	68.6	58.2 - 72.8

[5]Opioid substitution Therapy(OST) may also be known as Oral Substitution Therapy in some arenas

No response	105	24.3	18.8 - 32.5
Received any OST in the past 12 months	**N=44**		
Yes	30	50.3	0.0 - 100.0
No	14	49.7	0.0 - 100.0
Service received	**N=30**		
Methadone	15	50.0	
Buprenorphine	15	50.0	
Still in therapy			
Yes	21	70.0	
No	9	30.0	
Amount (mg) of Methadone receiving per day	**N=21**		
.00	10	47.6	
1.80	1	4.8	
2.50	1	4.8	
6.00	1	4.8	
7.00	1	4.8	
10.00	2	9.5	
13.00	1	4.8	
20.00	1	4.8	
25.00	1	4.8	
30.00	1	4.8	
55.00	1	4.8	
Amount (mg) of Buprenorphine receiving per day			
.00	11	52.4	
1.50	4	19.0	
2.00	4	19.0	
3.00	1	4.8	
80.00	1	4.8	
Duration of OST			
Less than a month	1	4.8	
1 - 3 months	6	28.6	
4 - 6 months	2	9.5	
7 - 12 months	3	14.3	
More than a year	9	42.9	

** Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI*

Chapter 9

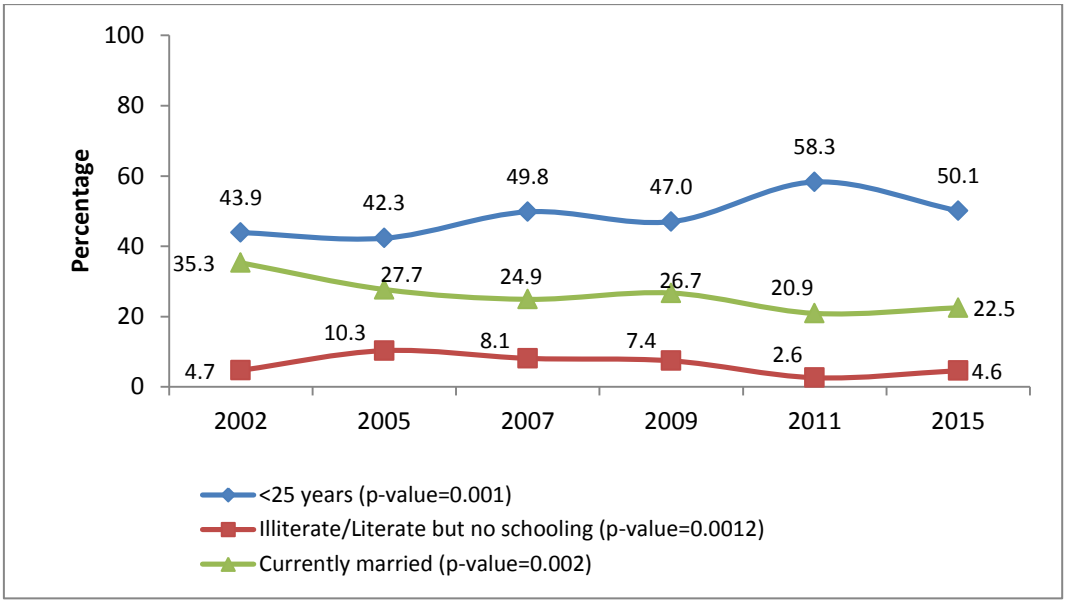
9 Comparative Analysis of Selected Characteristics

This chapter deals with a comparative analysis of selected characteristics and analyzes trend in certain key selected indicators by comparing the data obtained from all six rounds of IBBS's among PWIDs conducted within the Kathmandu Valley.

9.1 Socio-Demographic Characteristic

As seen in Figure 9-1 , the percentage of PWIDs younger than 25 years of age has decreased to 50.1 percent in 2015, as compared to 58.3 percent in previous round of IBBS survey in 2011. There is an indication that a proportion of young injecting drug users in Kathmandu seems to be decreasing. However, analysis of socio-economic characteristics indicates that the number of PWIDs originating from low literacy settings have increased over this time. Data also indicate that a proportion of married PWIDs have also increased as compared to the 2011 survey.

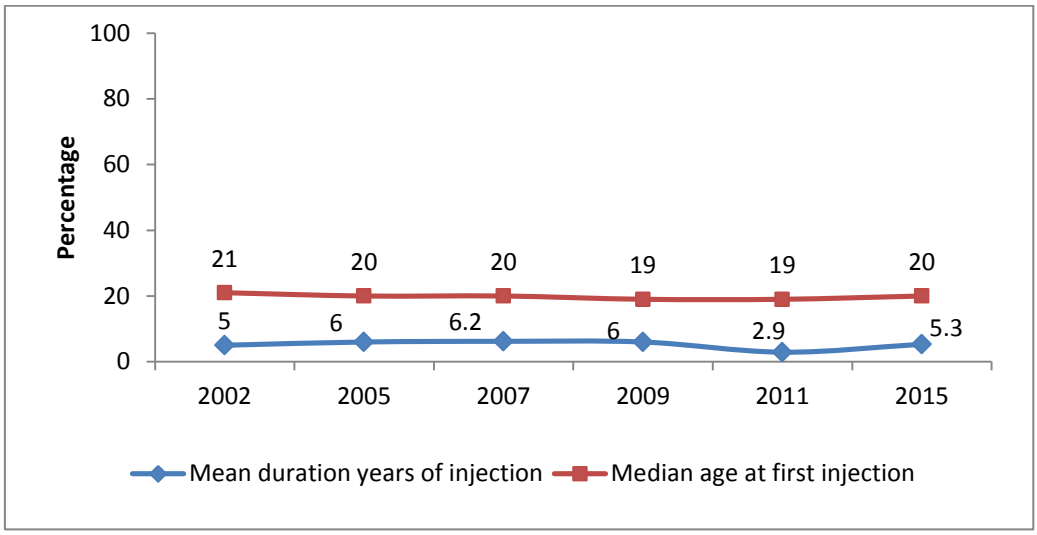
Figure 9-1 : Trend of Socio-Demographic Characteristic



9.2 Drug Injecting Practices

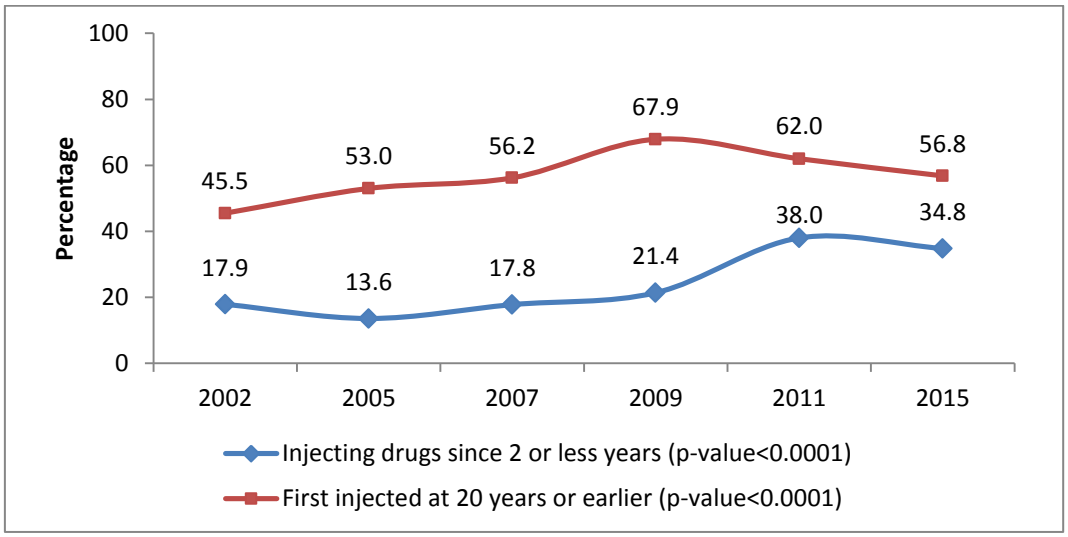
The average amount of time that respondents have been injecting drugs is seen to have increased to 5.3 years in the current 2015 survey from an average of 2.9 years in 2011. The median age of the respondents at their first injection has also increased from 19 years (2011) to 20 years (2015) (Figure 9.2)

Figure 9-2 : Mean years of duration of injection drug use and median age at first injection



The data indicates that, PWIDs generally get into injecting practices at quite a young age. The percentage of PWIDs who have started injecting drugs before the age of 20 years has decreased to 56.8 percent from the last round of the survey (62.0% in 2011). Respondents who injected drugs for up to 2 or less years have also decreased to 34.8 percent from previous rounds (Figure 9-3).

Figure 9-3 : Injecting behavior of PWID



9.3 Needle/Syringe Using Practices in the Past Week

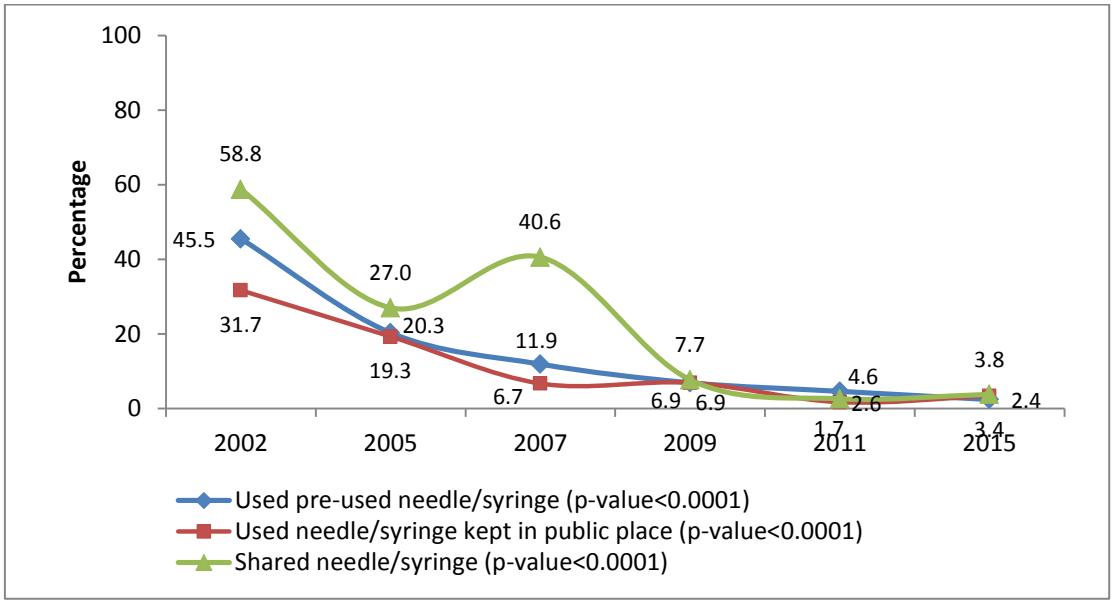
A trend analysis of PWIDs who practiced unsafe injecting habits in the week prior to the survey has decreased significantly since the first round of IBBS surveys in 2003. High risk behavior like injecting with a used needle/syringe shows a downward trend from 45.5 percent in 2003 to 2.4 percent in 2015.

Similarly, 31.7 percent of PWIDs reported injecting with syringes left in a public place in the 2002 survey; this high risk practice has been seen to be decrease to 3.4 percent in this sixth round of 2015.

In case of PWIDs who shared their needle/syringe a week prior to this survey, there is significant drop from the first round i.e. 58.8percent in 2002 to that of 3.8percent in

2015. However there has been a rise of 1.2percent from prior last round of the survey in 2011 (Figure 9-4).

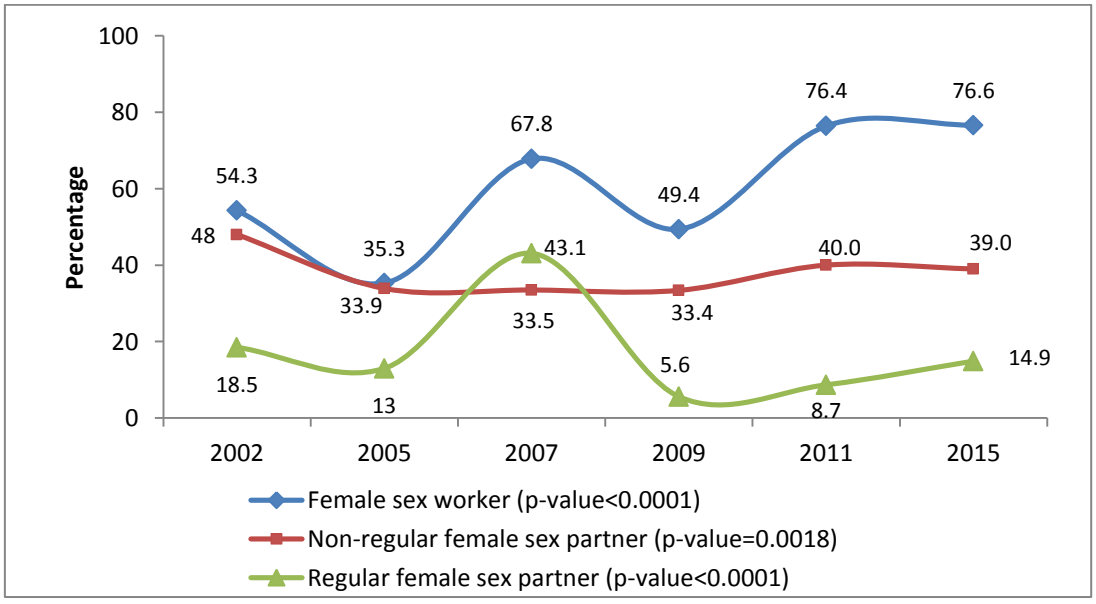
Figure 9-4 : Needle /syringe use behavior and sharing practice of the past week



9.4 Consistent Condom Use with Different Partners in the Past Year

Data indicates that there has been similar finding in consistent use of condoms with female sex workers and non-regular sex partners as compared to the previous round in 2011. However, the trend in consistent condom use, with a regular female sex partner, has increased by 6.2percent from the last round in 2011 (Figure 9-5).

Figure 9-5 : Consistent Condom use with Different Partners in the Past Year

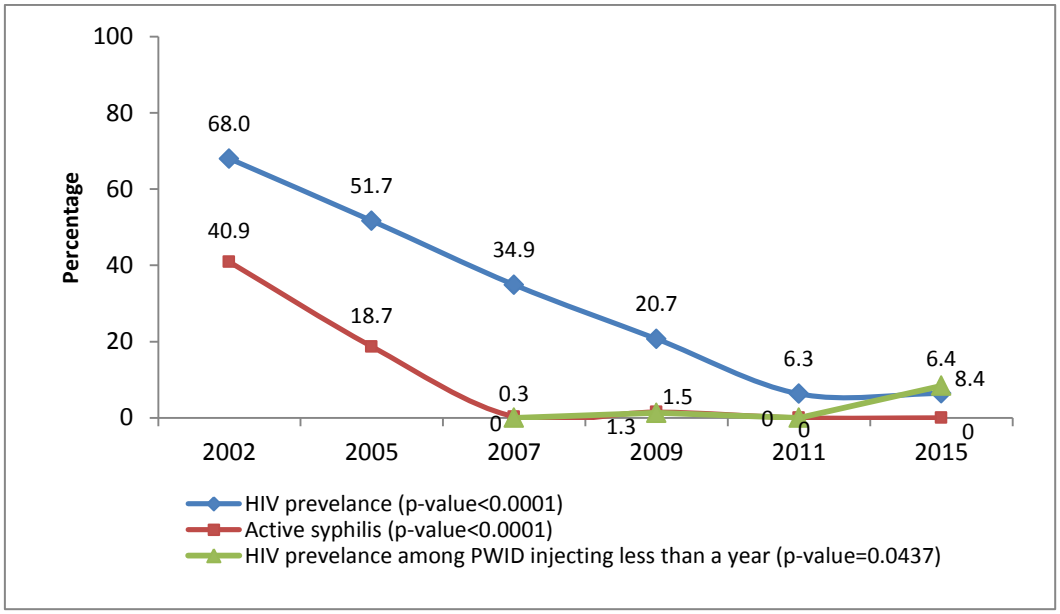


9.5 HIV and Syphilis Prevalence

The HIV prevalence among the respondent PWIDs of Kathmandu Valley has increased by slightly to 6.4 percent in 2015 from 6.3 percent as compared tothe previous round in 2011. However, the chi-square test for the prevalence of HIV has been significantly

decreased from 68.0 percent in 2002 to 6.4 percent in 2015 with p-value<0.0001. HIV prevalence among PWIDs injecting for less than a year has been indicated at 8.4 percent in 2015. Syphilis testing was introduced commencing only from the third round of IBBS in 2007 can be seen to be on a decreasing trend from 0.3 percent in 2007 (Figure 9-6).

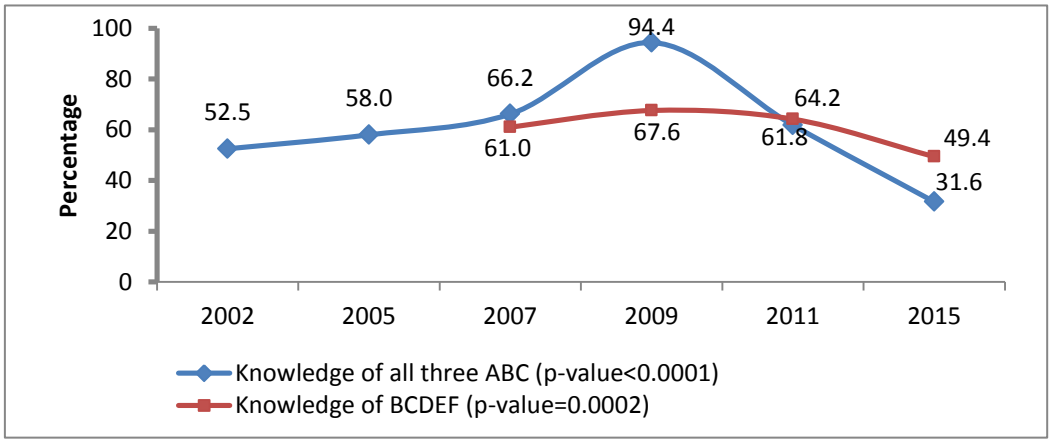
Figure 9-6: HIV and Syphilis Prevalence



9.6 Knowledge and Behavior

Knowledge assessed about HIV/AIDS prevention and ways in which HIV is transmitted among PWIDs' has been disaggregated into classified areas of awareness propagated safe sexual behaviors. They are: (A) abstinence from sex; (B) being faithful to one sex partner; and (C) consistent condom use. The percentage of PWIDs who were found to be aware of all three means has decreased to 31.6 percent in 2015 from the previous IBBS rounds. The proportion of respondents with comprehensive knowledge (BCDEF) of HIV has also been seen to have decreased by almost 14.8% from 2011 to 2015 (Figure 9-7).

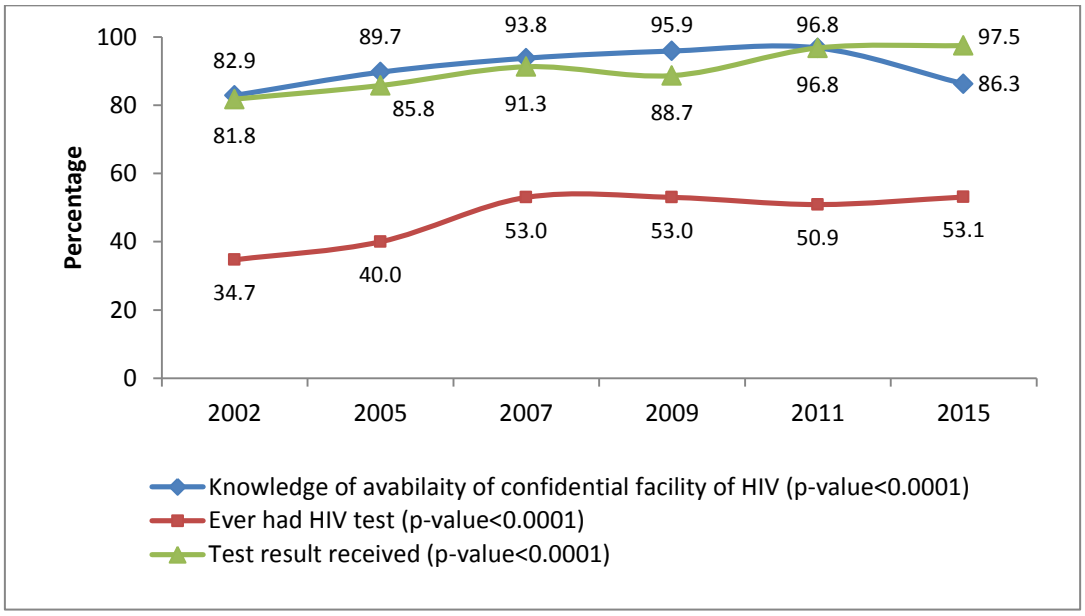
Figure 9-7 : Comprehensive knowledge on HIV and AIDS



Knowledge on availability and access to confidential HIV testing in the community among PWIDs has decreased in 2015 from the previous round. Similarly, numbers of

those receiving their test results is on the rise and the number of people who have done HIV test has also increased to 53.1percent in 2015 from 50.9percent in 2011(Figure 9-8).

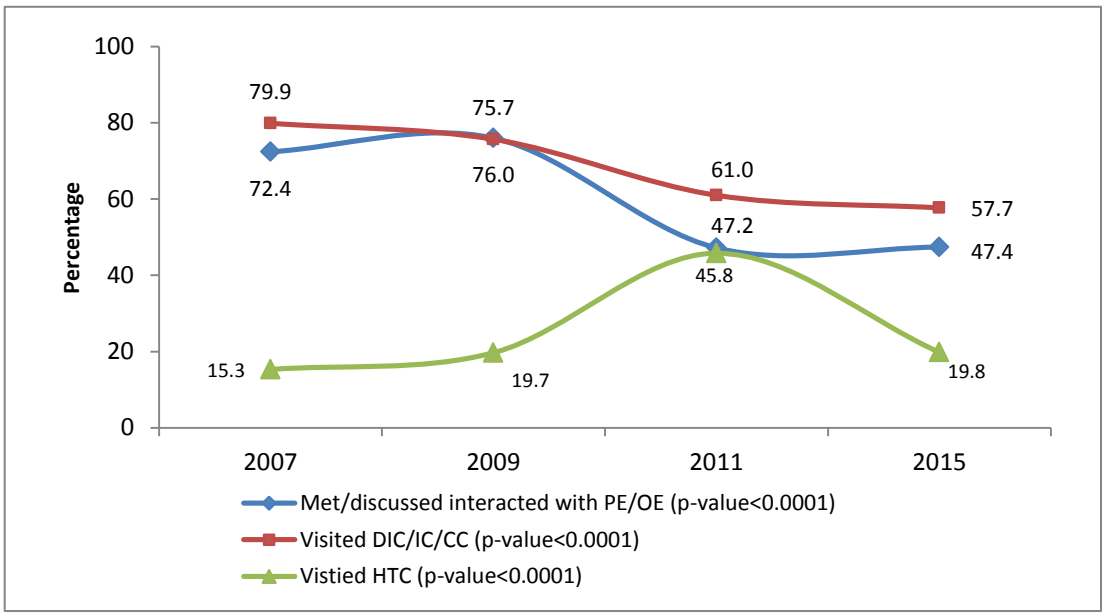
Figure 9-8 : Knowledge of HIV testing facility, test taken and received result



9.7 Participation in different HIV/AIDS programs in the past year

The proportion of survey participants who interacted with OEs or PEs and visiting DICs/ICs/CCs has remained almost similar and visiting HTC has decreased by more than 25percent from the previous round.(Figure 9-9).

Figure 9-9: Participation in different HIV/AIDS program in the past year



Chapter 10

10 Summary of Major Findings and Recommendations

10.1 Summary of Major Findings

The data from this survey indicates that the HIV prevalence rate among PWIDs in the Kathmandu Valley is still high, at 6.4 percent and ranges between 3.5 – 9.6 percent at a 95 percent confidence interval. HIV prevalence differed significantly according to age, literacy and socio-economic status, and the duration of injection drug use. Those PWIDs who were older than 20 years were seen to be more likely to be HIV-positive (6.5%) than those PWIDs who were less than 20 years old (6.1%). HIV prevalence among ever married PWIDs found to be 9.9 percent and 5.1 percent in never married PWIDs. Further, HIV prevalence among illiterate, literate or with no formal schooling among PWIDs was 3.4 percent, while PWIDs who had attended formal school was 6.4 percent. Likewise, HIV prevalence was found to be higher among those who had been injecting drugs for more than five years (12.2%) as compared to of those who had been injecting drugs for less than five years. The prevalence was found to be 8.4 percent among those who had been injecting drugs for less than a year.

Consumption of alcohol and oral drugs were common practices among PWIDs; all of the respondents were found to have had some experience with taking oral drugs. While the data indicates that 62.9 percent had consumed alcohol in the month prior to the survey, 37.1 percent never consumed alcohol. The majority of the respondents (80.2%) had been using drugs for more than two years.

The highest frequency of injecting practices of the respondents over the past week prior to the survey was indicated at 27.2 percent with a frequency of 2-3 times a week. Among the respondents 22.3percentinjected at least once on a daily basis with highest frequency of daily injecting shown to be at 4 or more times a day.

The percentage of PWIDs that injected with a syringe used by others in the past week was (3.4%) and (2.4%) had used a syringe left at a public place. On the other hand 3.8percent reported sharing syringe/needle with another injecting peer.

Regarding drug sharing behavior, 3.0 percent injected with a prefilled syringe given by another peer injector in the past week. It was found that 2.6 percent injected with a syringe after drugs were transferred into it from another syringe. 3.4 percent reported having shared a bottle, spoon, vial/container, cotton/ filter or rinse water and 4.3 percent injected from a common container.

Only 49.9 percent knew that they could obtain a clean needle/syringe from PE or OE from a needle syringe program. The data indicated that 25.6 percent had attempted at least some type of drug treatment in the past.

Around 94.8 percent of PWIDs reported having experienced sexual intercourse at least once before the survey. Among them, 74.5 percent reported being sexually active in the past year. In the year preceding the survey, only 22.1 percent had had sex with a regular partner in the past year and 48.5 percent had been with a non-regular sex partners with 23.1 percent had had sex with FSWs in the past year alone. 23.4 percent reported non consistent use of condoms while having sex with a female sex worker.

23.5 percent of the respondents reported not having any knowledge about STI symptoms. Among the respondents 11 percent experienced symptoms of STIs in the past year and only 6.9 percent sought treatment for STIs. Knowledge of HIV

prevention related ABC was exhibited by 31.6 percent and BCDEF was exhibited by 49.4 percent.

Only 47.4 percent of the respondents had had a meeting with PE/OE within the last 12 months. Also only 57.7 percent had ever visited a DIC/IC/CC in the past 12 months with 19.8 percent visiting HTC services for an HIV test. Among the respondents only 7.1 percent had ever been enrolled in OST services.

Testing for Hepatitis C and B among the PWIDs was introduced for the first time in IBBS in this sixth round. Blood samples were collected for the detection of Hepatitis B and Hepatitis C. The tests showed HCV prevalence of 22 percent among PWIDs of the Kathmandu Valley.

10.2 Recommendations and Key Action Points

Recommendation 1: On activities to target youth and adolescent PWIDs

Data from the study indicates that a considerable proportion of PWIDs in Kathmandu Valley are young below the age of 25 years (50.1%). It is recommended that specific program activities that target youths and adolescents should be designed to provide information, awareness, education and services with behavior and lifestyle change communication related to drug use, sexual reproductive health and HIV interventions in a mutually reinforcing manner through contemporary electronic and social media coupled with peer based community in reach for the most hard to reach young populations. Different mediums of communications such as hotlines, websites, print media, radio/television and social media should be wide utilized to reach these groups.

Recommendation 2: Regarding access and availability of sterile needle and syringe exchange program

Although a high majority of the respondents claimed practicing safe injecting behaviors, The percentage of PWIDs that injected with a syringe used by others in the past week was (3.4%) and (2.4%) had used a syringe left at a public place. On the other hand 3.2% reported giving a used syringe/needle to another injecting peer. Regarding drug sharing behavior, 3.0% injected with a prefilled syringe given by another peer injector in the past week. It was found that (2.6%) injected with a syringe after drugs were transferred into it from another syringe. (3.4%) reported having shared a bottle, spoon, vial/container, cotton/ filter or rinse water and (4.3%) injected from a common container. Only 49.9% knew that they could obtain a clean needle/syringe from PE or OE from a needle syringe program. It is recommended to increase the access to and availability of clean and sterile needle and syringe exchange programs by incorporating low dead space needle and syringes According to WHO guidelines for people who inject drugs it is suggested that needle exchange programme's provide low dead space syringes for distribution to people who inject drugs due to evidence that the provision of low dead space syringes leads to a reduction in the transmission of HIV, and hepatitis B and C.[6, 7] If 50% of people who inject drugs switch to low dead space syringes an estimated reduction of 33% of new HIV, and Hepatitis B and C infections will occur.[8] Evidence suggests that Low Dead Space Syringes (LDSS) may

[6]http://apps.who.int/iris/bitstream/10665/77969/1/9789241504379_eng.pdf
[7]http://apps.who.int/iris/bitstream/10665/77969/1/9789241504379_eng.pdf
[8]Modeling the effect of high dead- space syringes on the human immunodeficiency virus (HIV) epidemic among injecting drug users. Addiction [0965-2140] Bobashev yr:2010 vol:105 iss:8 pg:1439 -1447

substantially reduce HIV transmission among PWID, who share syringes. LDSS represent a potentially promising intervention that deserves serious consideration.[9]

Recommendation 3: With respect to the sustainability and scale up OST and harm reduction programs.

HIV prevalence was found to be higher among those who had been injecting drugs for more than five years (12.2%) as compared to of those who had been injecting drugs for less than five years. The highest frequency of injecting practices of the respondents over the past week prior to the survey was indicated at 27.2 percent with a frequency of 2-3 times a week. Among the respondents 22.3% injected at least once on a daily basis with highest frequency of daily injecting shown to be at 4 or more times a day. Among the respondents only 7.1 percent had ever been enrolled in OST services. This indicates interventions that promote behavioral change activities should be continued and scaled up to cover more PWIDs. Harm reduction initiatives should also be continued and expanded further to promote the transition from drug injecting practices to clinically supervised OST with a balanced mix of both Methadone and Buprenorphine and drug treatment programs to provide a comprehensive range of choices for service recipients.

Recommendation 4: Comprehensiveness of programs with prevention components coupled with condom provision and promotion of condom use.

Around 94.8 percent of PWIDs reported having experienced sexual intercourse at least once before the survey. Among them, 74.5 percent reported being sexually active in the past year. In the year preceding the survey, only 22.1 percent had had sex with a regular partner in the past year and 48.5 percent had been with a non-regular sex partners with 23.1 percent had had sex with FSWs in the past year alone. 23.4 percent reported non consistent use of condoms while having sex with a female sex worker. The decreasing trend of consistence condom use with FSW and non-regular sex partners, as well as low use condom with a regular partner, are causes for concern. It is recommended that implementation of "combined" prevention programming, including condom social marketing to significantly increase consistent condom use for primary sexual partners and for casual partners. Cumulative implementation of combined prevention programming for PWID has been associated with substantial decreases in sexual risk behavior among HIV sero-positives.[10]

Recommendation 5: The need for mobilization of HIV testing services at community level

23.5 percent of the respondents reported never heard about STI.. Around 11% of those PWIDs experiencing STI symptoms only 6.9 percent had sought treatment for STIs. At the same time, although majority of the PWIDs (86.3%) were aware of the existence of HIV testing facility, about 46.9 percent had never taken up HIV testing. It is recommended that increasing awareness about HIV testing facilities in the community and increasing HIV test uptake is of crucial importance. Provision of client-friendly service during HIV test and STI treatment should be strengthened to increase HIV and STI test intake. Bearing in mind that testing is the entry point to treatment, Peer/outreach educators are good contact points to disseminate necessary information to expand coverage HTC. Further, it should be noted that in resource-limited countries

[9]Low dead-space syringes for preventing HIV among people who inject drugs: promise and barriers, ZuleWA,Substance Abuse Treatment Evaluations and Interventions Program, RTI International, Research Triangle Park, NC 27709-2194, USA. zule@rti.org, http://www.ncbi.nlm.nih.gov/pubmed/22627710

[10]http://www.ncbi.nlm.nih.gov/pubmed/24271348

HTC can be substantially increased using an intervention that involves community-led testing, mobilizing targeted communities, and the provision of post-testing support. Community led testing is associated with higher testing coverage for to reach populations, as compared with conventional Voluntary Counseling and Testing (VCT) services and can lead to the diagnosis of more unidentified cases of HIV. Bringing VCT directly to communities and linking HTC with mobilization efforts and support services after HIV testing results in substantially greater uptake of both HIV testing and case detection than does standard voluntary counseling and testing.[11] The benefits of community-led testing extend beyond increasing the number of tested individuals and HIV cases diagnosed, and could help combat the stigma that surrounds HIV as well..

There are however, e some challenges when considering the introduction of community-based testing, in particular the use of peer-led testing within a service. The most important is ensuring that staffs conducting HIV testing are trained to ensure that the clients receive high quality service and, in particular, any positive test results are handled sensitively and professionally. Clinical oversight from medical professionals would also need to be place from both a professional and legal standpoint.[12]

Recommendation 6: The need for expanded quality, coverage and information dissemination regarding integrated services to PWID

Knowledge of HIV prevention related ABC was exhibited by 31.6 percent and BCDEF was exhibited by 49.4 percent. However, only 47.4 percent of the respondents had had a meeting with PE/OE within the last 12 months. Also only 57.7 percent had ever visited a DIC/IC/CC in the past 12 months with 19.8 percent visiting HTC services for an HIV test. It is necessary to increase the geographical and demographical coverage of hard to reach groups through innovative approaches by the insertion of program activities into mainstream health services with a strong accompanied referral and follow-up mechanism to address the compartmentalization of HIV related services within the public health sector. In order to achieve this it is also recommended to increase the human resource allocation component for OE/PE to increase the overall awareness about the availability and access service even remotely linked with HIV services. Further it is recommended to integrate a number of services to create a "one stop shop" solution.

Recommendation 7: Need for program for HCV and HBV case detection, surveillance with entry point to treatment.

Testing for Hepatitis C and B among the PWIDs was introduced for the first time in IBBS in this sixth round. Blood samples were collected for the detection of Hepatitis B and Hepatitis C. In this sixth round of IBBS, results for Hepatitis C have shown that HCV prevalence is higher than the general population. The tests showed HCV prevalence of 22 percent among PWIDs of the Kathmandu Valley. Since drug injecting behavior has been linked with HCV infection in Nepal and elsewhere, the current finding shows that interventions are urgently required. Based on the finding of this study HBV prevalence was found to be lower, among PLHIV Populations, than previously reported on. However, it is important to note that although HBV vaccine is available, HBV also a blood borne pathogen therefore requires constant surveillance with vaccination strategy. This need tobe implemented within this population to

[11]http://www.aidsmap.com/Community-based-testing-increased-rates-of-HIV-testing-and-detection-in-resource-limited-settings/page/1789140/
[12]http://endinghiv.org.au/nsw/community-based-testing/

prevent new infection and increase in HBV prevalence. There is need for more awareness programs to be conducted among PWID focusing on improving their knowledge HBV and HCV with referral linkages to treatment.

Recommendation 8: The generation of strategic information to inform Policy, Planning and Implementation at the national level.

Periodic IBBS with sub-population will help design and implement timely intervention strategies and monitor the changes in diversity of and effectiveness of the interventions in controlling the epidemic. By reviewing the available evidence from research-driven protocols or evaluations of interventions conducted under specific field conditions (effectiveness studies), where insufficient evidence exists, evaluation studies may need to be implemented to support evidence-based decision-making. This is an important step, although it is often not sufficiently funded. It is recommended that resource allocation should be prioritized at the national and policy levels for the generation of strategic information in order to render interventions effective.

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Annexes

Annex – 1: Indicators for Monitoring and Evaluation of HIV Response

Selected Key Indicators	Total (N=340)
HIV	6.4%
Active Syphilis	0.0%
Syphilis History	0.0%
Hepatitis B	0.0%
Hepatitis C	22.0%
Median age (Range)	25 (16-55)
Literate	98.3%
Ever Married	25.4%
Consumed alcohol everyday	4.7%
Ever been imprisonment	66.4%
Duration (in months) of injecting drugs Mean±SD/Median(Range)	63.5±56.15/48(3-300)
Median age (Range) of first drug injection	20 (14 - 39)
People injecting more than once every day	11.6%
Shared needle in the past week	3.8%
Used non sterile syringe/needle in past month	4.0%
Used non sterile injecting equipment in past month	4.3%
Premarital sex	91.4%
Consistent condom use with regular female sex partners in the past year (n=86)	14.9%
Consistent condom use with FSW in the past year (n=81)	76.6%
Consistent condom use with non-regular female sex partner in past year (n=156)	39.0%
Knowledge of all three indicators: ABC	31.6%
Knowledge of all five indicators: BCDEF	49.4%
Ever had HIV test	53.1%
Met/Interacted with PE/OE/CM	47.4%
Visited DIC	57.7%
Visited HTC Center	19.8%
Received OST Services	7.1%
Needle obtained from needle exchange program	49.9%

Annex – 2: Sample Size Estimation

$$n = D\frac{[Z_{1-\alpha}\sqrt{2\bar{p}(1-\bar{P})} + Z_{1-\beta}\sqrt{P_1(1-P_1)} + P_z(1-P_z)]^2}{(P_2-P_1)^2}$$

n= required minimum sample size per survey round

D= Design effect (assumed in the following equations to be the default value of 2)

P_1 = The estimated proportion at the time of the first survey.

P_2 = The target population at some future date, so that (P_2-P_1) is the magnitude of change of change you want to be able to detect.

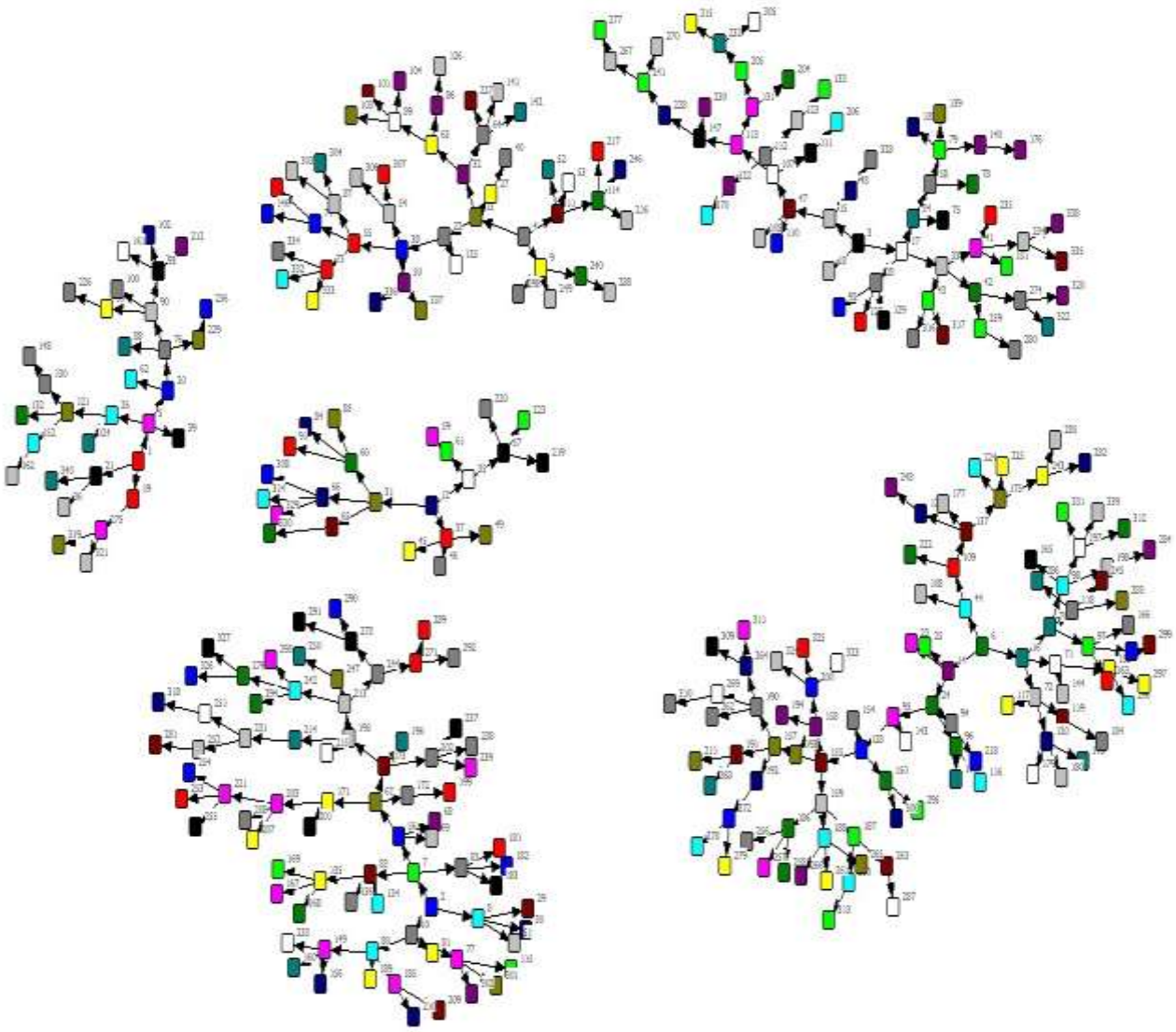
$\bar{P}$= (P_1+P_2)/2

$Z_{1-\alpha}$= The Z-score corresponding to the level of significance

$Z_{1-\beta}$ = The Z-score corresponding to the level of power

* Guidelines for repeated behavioral surveys in populations at risk of HIV, Page 47, FHI-2000.

Annex – 3: Wave of Recruitment of PWID by 'Seeds'



Annex – 4: Questionnaire

Integrated Biological and Behavioral Surveillance Survey
among People Who Inject Drugs in Pokhara Valley

Namaste! My name is ....., I am here from ……to collect data for a research survey. This survey is being conducted by National Centre for AIDS and STD Control (NCASC), Ministry of Health and Population. During this interview, I will ask you some personal questions that will be about sexual behavior, use and promotion of condoms, STI/HIV/AIDS and use of drugs and needle/syringes. You may feel uncomfortable to answer some questions relating to your personal behavior, but it is important that you provide correct information. We will also take about 5-7 ml blood sample for testing HIV and syphilis infection. If it is determined that you have any STI symptoms, we will provide treatment free of charge. We also will treat for syphilis on the basis of RPR test on the same day of interview. The information given by you will be strictly treated as confidential. Nobody will know whatever we talk about because your name will not be mentioned on this form and collected samples. All the mentioned information will be used only for the survey purpose. This survey will take about an hour.

It depends on your wish to participate in this survey or not. You do not have to answer those questions that you do not want to answer, and you may end this interview at any time you want to. But I hope you will participate in this survey and make it a success by providing correct answers to all the questions.

Would you be willing to participate?

1. Yes 2. No

Signature of the interviewer: [redacted] Date: [redacted] /2072

Operational definition of PWIDs:

"Current drug injectors aged 16 years or above who had been injecting drugs for non-medical purposes for at least three months prior to the date of the survey"

Seed:
Yes……1 No……..2

Coupon brought by the respondents ☐☐☐☐☐ *(Write '0' for seed)*
Coupon number given:

1. ☐☐☐☐☐
2. ☐☐☐☐☐
3. ☐☐☐☐☐

Did the interviewee abandon the interview?

Yes ……..1 No……2
(Precise the number of the last question completed: Q _____)

Interviewer Name: _____Code Interviewer: _____
Date Interview: _____/ _____/ 2072
Checked by the supervisor: Signature: _____Date: _____/ ____/ 2015

Data Entry # 1: Clerk's
Data Entry # 2: Clerk's name: Date / /2015

001. Has someone interviewed you from …… with a questionnaire in last few weeks?

1. Yes 2. No (continue interview)

↓

When?

_____Days ago (make sure that it was interviewed by …… and close the interview)

002. Respondent's ID ☐☐☐☐☐☐ #:

002.1 Respondent referred by coupon no. ☐☐☐☐☐☐

002.2 In which part of the body respondent usually inject? (Confirm by observation)

Arm……	1	Wrist……..	2
Femoral/Groin area……	3	Calf muscles…….	3
Thigh……	5	Hand……	6
Behind Knee……...	7	Armpit……..	8
Finger…….	9	Forearm…….	10

002.3 Did you share needle/syringe with the friend who brought you here? (Don't ask with seed)

1. Yes 2. No

002.4 How long you have been injecting drugs?

☐☐ ☐☐

Years Months

(NOTE: THIS IS A SCREENING QUESTION. IF THE RESPONSE IS LESS THAN THREE MONTHS STOP INTERVIEW BECAUSE THIS PERSON IS NOT ELIGIBLE FOR INCLUSION IN THE SAMPLE)

003. Interview Location (to be filled by interviewer)

003.1 Name of location----------

003.2 Ward No.----------

003.3 VDC/Municipality: _____

003.4 District: _

1.0 BACKGROUND OF RESPONDENT

9	**Questions**	**Coding Categories**		**Skip to**
101	Where are you living now? **(Write current place of residence: Ward No. Tole, Lane etc.)**	Ward ..... VDC/Municipality_____ District_____		
102	How long have you been living continuously at this location? **(Write 995 if less than one month)**	Month Always (since birth) Others (Specify)_____	0 96	
103	In the last 12 months have you been away from your home for more than one-month altogether? **(Left home, village/district)**	Yes No Don't know No response	1 2 98 99	
104	How old are you?	Age ..... **(write the completed years)**		
105	What is your educational status? **(Circle '0' if illiterate, '19' for the literate without attending the school, and write exact**	Illiterate Literate Grade	0 19	

	number of the passed grade)	**(write the completed grade)**	
106	What is your caste? **(Specify Ethnic Group/Caste)**	Ethnicity/Caste _____ Code No.....	
107	What is your current marital status?	Never married ..... 1 Married ..... 2 Divorced/Permanently separated ..... 3 Widow ..... 4 Other (Specify)_____ 96	→ 107
108	How old were you when you first got married?	Age ..... **(write the completed years)**	
109	Which of the following best describes your current living situation? (Select only one option)	Homeless on the street ..... 1 Living in own home ..... 2 Living in a residential hotel ..... 3 Rented apartment ..... 4 Other(specify)_____ 96	
110	With whom you are living now?	Living with wife ..... 1 Living with female sexual partner ..... Living without sexual partner ..... 2 Others (Specify)_____ 3 No response 96 99	
111	How many dependents are there in your family?	Number: ……..	
112	During the past one-month how often have you had drinks containing alcohol? **(Such as beer, local beer etc.)**	Every day ..... 1 More than once a week ..... 2 Less than once a week ..... 3 Never drink ..... 4 Others (Specify)_____ 96 No response 99	

2.0 DRUG USE

Q.N.	Questions	Coding Categories	Skip to
201	How long have you been using drugs? **(Drug means medicine not used for treatment purpose rather used for Intoxication**)	Years..... Months..... No response 99	
202	How old were you when you first injected drugs? **(Include self-injection or injection by another)**	Years ..... **(write the completed years)**	
203	How long have you been injecting drugs? **(Include self-injection or injection by others)**	Years ..... Months ..... No response 99	
203.1	Have you injected drugs in the last month?	Yes.....1 No 2	→ 204
203.2	If Yes, have you used non-sterile syringe/needle at any time in the last month?	Yes.....1 No 2	

203.3	Have you used non-sterile injecting equipment at any time in the last month?	Yes.....1 No 2	

204 Which of the following types of drugs have you used and/or injected in the past one-week?
(Read the list, multiple answer possible)

Description	Used in Last-Week				Injected in Last-Week			
	YES	NO	DK	NR	YES	NO	DK	NR
1. Tidigesic					1	2	98	99
2. Brown Sugar	1	2	98	99	1	2	98	99
3. Nitrosun	1	2	98	99	1	2	98	99
4. Ganja	1	2	98	99				
5. Chares	1	2	98	99				
6. White Sugar	1	2	98	99				
7. Phensydyl	1	2	98	99				
8. Calmpose	1	2	98	99	1	2	98	99
9. Diazepam	1	2	98	99	1	2	98	99
10. Codeine	1	2	98	99	1	2	98	99
11. Phenergan	1	2	98	99	1	2	98	99
12. Cocaine	1	2	98	99				
13. Proxygin	1	2	98	99	1	2	98	99
14. Effidin	1	2	98	99	1	2	98	99
15. Velium 10	1	2	98	99	1	2	98	99
16. LSD	1	2	98	99				
17. Nitrovate	1	2	98	99	1	2	98	99
18. Combination (Specify)	1	2	98	99	1	2	98	99
96. Others (Specify)_	1	2	98	99	1	2	98	99

204.0.1	Have you used these drugs in combination form?	Yes.....1 No .....2 No respons……..99	→ 204.1
204.0.2	If yes, how many drugs has been used?	……..(numbers)	
204.0.3	What are the most frequently combination that is used ?	……..(Specify)	
204.1	In the last month, did you switch from one drug to another?	Yes……1 No……2	→ 205
204.1.1	If yes, which drug?	From _____drug To _____drug	
204.1.2	What is the reason for switching?	Reduce the use of Tidigesic……1 Costly……..2 Easily unavailable……3 Others(specify)_____96	

205	How many times would you say you injected drugs yesterday?	Times ..... Not injected 0	→ 209
206	Would you like to tell me why you did not injected yesterday?	Lack of money……..1 Inhaled Ganja……3 Taken brown sugar……4 Injected last day…….5 Drink Alcohol……6 Unavailability of drugs……..7 Was in police custody……8 Taken Nitrosun……9 Was ill……..10 Used another medicine……..11 Busy in household work…….12 Others(specify)_____96	
207	How many days ago you injected drugs ?		
208	How many times would you say you injected drugs on the last day?	Times	
209	During the past one-week how often would you say you injected drugs?	Once a week .....1 2-3 times a week.....2 4-6 times a week.....3 Once a day.....4 2-3 times a day .....5 4 or more times a day.....6 Not injected in the last week.....7 Don't know .....98 No response 99	
210	(Ask whether the respondent was ever arrested or not then ask the following questions) Have you ever been imprisoned or detained for any reason?	Yes.....1 No .....2 No response 99	→ 211
210.1	In the past year, have you ever been imprisoned or detained for any reason?	Yes.....1 No .....2 No response 99	→ 211
210.2	In the past year, have you ever been imprisoned for drug-related reason?	Yes.....1 No .....2 No response 99	→ 211
210.3	In the past year, how many times have you been imprisoned for drug-related reason?	Times ..... No response 99	
210.4	Have you ever injected drugs while in prison?	Yes.....1 No .....2 No response 99	

211	How often you cross the border (Indo-Nepal) to buy and use the illicit drugs in the past 12 months?	Always……..1 Most of the time……2 Sometimes……3 Never……4 No response……99	

3.0 NEEDLE SHARING BEHAVIORS

Q.N.	Questions	Coding Categories	Skip to
301	Think about the times, you have injected drugs yesterday/last day. How many times d i d you inject drugs on that day? **(Fill the number from answer to Q. 205 or 208 and verify by asking the respondent)**	Times	
302	The last time you injected, how did you get that syringe/needle? **(Public place means places other than the IDU's home that are used to hide syringe/needle)**	My friend/relative gave it to me after his use 1 Unknown person gave it to me after he use 2 I picked it up from a public place which was left there by others 3 I picked it up from a public place which was left there by myself 4 I used a new needle/syringe given by NGO staff/volunteer 5 **(write the name of organization)** I used a needle/syringe which I purchased 6 I reused my own needle/syringe 7 My friend gave new needle/ syringe 8 Others (Specify) 96 Don't know 98 No response 99	
302.1	If you were in a group the last time that you injected, how many different people in the group do you think used the same needle?	Nos. …… Injected alone ……95	
303	Think about the time before the last time you injected, how did you get that syringe/needle? **(Public place means places other than the IDU's home that are used to hide syringe/needle)**	My friend/relative gave it to me after his use 1 Unknown person gave it to me after he use 2 I picked it up from a public place which was left there by others 3 I picked it up from a public place which was left there by myself 4 I used a new needle/syringe given by NGO staff/ volunteer 5 **(write the name of organization)** I used a needle/syringe which I purchased 6 I reused my own needle/syringe 7 My friend gave new needle/Syringe 8 Others (Specify) 96 Don't know 98 No response 99	
303.1	That time, If you were in a group, how many different people in the group do you Think had used the same needle?	Nos. ..... Injected alone 95	

304	Now think about the time before (before Q.303), how did you get that syringe/ needle? **(Public place means places other than the PWID's home that are used to hide syringe/needle)**	My friend/relative gave it to me after his use ..... 1 Unknown person gave it to me after he use ..... 2 I picked it up from a public place which was left there by others ..... 3 I picked it up from a public place which was left there by myself ..... 4 I used a new needle/syringe given by NGO staff/ volunteer ..... 5 **(Write the name of Organization)** I used a needle/syringe which I purchased ..... 6 I reused my own needle/syringe ..... 7 My friend gave new needle/syringe ..... 8 Others (Specify) …….. 96 Don't know ..... 98 No response 99	
304.1	That time If you were in a group, how many different people in the group do you think had used the same needle?	Nos……. Injected alone ……..95	
305	Think about the times, you have injected drugs during the past one-week. How often was it with a needle or syringe that had previously been used by someone else?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Not injected in the last week ..... 5 → 314 Don't know ..... 98 No response 99	
305.1	When you injected drug during the past week, how often did you use a syringe/needle that had been left in public place? **(Public place means places other than the IDU's home that are used to hide syringe/needle)**	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never ..... 4 Don't know ..... 98 No response 99	

306 In the past one-week, did you ever share needles and syringes with any of the following?

Read out list. Multiple answers possible	**Yes**	**No**	**DK**	**NR**
1.Your usual sexual partner	1	2	98	99
2.A sexual partner who you did not know	1	2	98	99
3.A friend	1	2	98	99
4.A drugs seller	1	2	98	99
5.Unknown Person	1	2	98	99
96. Other (Specify) _____	1	2		

307	With how many different injecting partners did you share needles or syringes in the past one- week? **(Count everyone who injected from the same syringe)**	Number of partners ..... Don't know ..... No response 98 99	

308	In the past one-week, how often did you give a needle or syringe to someone else, after you had already used it?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never ..... 4 Don't know ..... 98 No response 99	
309	In the past-week, did you ever inject with a pre-filled syringe? **(By that I mean a syringe that was filled without you witnessing it)**	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
310	In the past one-week, how often did you inject drugs using a syringe after someone else had squirted drugs into it from his/her used syringe? **(Front-loading/back-loading/ splitting)**	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never ..... 4 Don't know ..... 98 No response 99	
311	In the past one-week, when you injected drugs, how often did you share a cooker/ vial/container, cotton/filter, or rise water?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never ..... 4 Don't know ..... 98 No response 99	
312	In the past one-week, how often you draw up your drug solution from a common container used by others?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never ..... 4 Don't know ..... 98 No response 99	
312.1	In the past one year have you switched from sharing to non-sharing practice?	Yes ..... 1 No 2	
	Check Q no. 305 and those who have not injected in the last one week go to Q314		
313	In the past one-week, when you injected with needles or syringes that had previously been used, how often did you clean them first?	Every time ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never ..... 4 Never reused ..... 5 Others (Specify)_____ 96 Don't know ..... 98 No response 99	314

313.1	If cleaned, how did you usually clean them?	With water 1 With urine 2 With saliva 3 Boil the syringe in water 4 With bleach 5 Burning the needle with matchstick Others (Specify)_____ 6 Don't know 96 No response 98 99	
314	Can you obtain new, unused needles and syringes when you need them?	Yes 1 No 2 Don't know 98 No response 99	316
315	Where can you obtain new unused needles and syringes? **(Do not read out list. Multiple answers possible. Probe only with "Anywhere Else?")**	Drugstore 1 Other shop 2 Health work 3 Hospital 4 Drug wholesaler/drug agency 5 Family/relatives 6 Sexual partner 7 Friends 8 Other drugs users 9 Drugs seller 10 Needle exchange program of___ **(write the name of Organization)** Steal from legitimate source (hospital./pharmacy) 11 Buy on streets 12 Other (Specify)_____ 13 96	
316	In the past one-year, did you ever inject drug in another city/district (or another country)?	Yes 1 No 2 Don't remember 98 No response 99	316.4
316.1	If yes, in which other cities/districts did you inject, including cities in other countries?	Cities_____ _____ _____ Districts_____ _____ _____ Country _____ _____ _____	
316.2	Think about the times you injected drugs in another city/district (including abroad) how often was it with a syringe/needle that had previously been used by someone else?	Every times 1 Almost every-times 2 Sometimes 3 Never 4 Don't know 98 No response 99	

316.3	When you injected drugs in another city, how often did you give a syringe/needle to someone else?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never ..... 4 Don't know ..... 98 No response 99	
316.4	In the last 12 months, have any of an outreach worker, a peer educator or a staff from a needle exchange program given you a new needle/syringe?	Yes ..... 1 No ..... 2 Don't' remember ..... 98 No response 99	
317	Are you currently under treatment (or receiving help) or have you ever received treatment (or help) because of your drug use?	Currently under treatment ..... 1 Was in treatment but not now ..... 2 Have never received treatment. ..... 3 No response 99	401
318	How many months ago did you last receive treatment or help for your drug use?	Months Don't know ..... 98 No response 99	
319	What kind of treatment or help you received? (Do not read out the responses, probe asking, "Are there any other kinds of treatment that you've received?" (**Multiple Answers Possible)**		

	Types of Treatments	**Name of Institutions**
	1. Outpatient counseling	
	2. Self-help groups	
	3. Detoxification w/methadone	
	4. Maintenance w/methadone	
	5. Detoxification w/other drugs	
	6. Detoxification with no drug	
	7. Residential rehabilitation	
	8. Helped for cold turkey without medicine	
	9. Forced for cold turkey by others without treatment	
	96. Other (Specify)	
	99. No response	

4.0 SEXUAL HISTORY

Q.N.	**Questions**	**Coding Categories**	**Skip to**
401	How old were you at your first sexual intercourse?	Years old ..... ***(Write completed years)*** Never had sexual intercourse ..... 0 → Don't know ..... 98 No response 99	601

402	Have you had sexual intercourse in the last 12 months?	Yes ..... 1 No ..... 2 No response ..... 99 }	404
403	In total, how many different female sexual partners have you had sex in the last 12 months?	Total Number	
403.1	How many were female "regular partners"? **(Your wife or live-in sexual partners)**	Number ..... Don't know ..... 98 No response 99	
403.2	How many were female “sex worker”? **(Partners to whom you bought or sold sex in exchange for money or drug)**	Number ..... Don't know ..... 98 No response 99	
403.3	How many were female "non-regular partners"? **(Sexual partners, you are not married to and have never lived with and did not have sex in exchange for money)**	Number ..... Don't know ..... 98 No response 99	
404	We have just talked about your female sexual partners? Have you ever had any male sexual partners also?	Yes ..... 1 No ..... 2 No response ..... 99 }	501
404.1	If yes, have you had anal sex with any of your male partners in the last 12 months?	Yes ..... 1 No ..... 2 No response ..... 99 }	501
404.2	With how many different male partners have you had anal sex in the last 12 months?	Number ..... Don't know ..... 98 No response 99	
404.3	The last time you had anal sex with a male sex partner did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't Know ..... 98 No response 99	
404.4	How often have you used a condom in an anal sex with male sex partner in the past 12 months?	Every Times ..... 1 Almost Every Times ..... 2 Some Times ..... 3 Never Used ..... 4 Don't Know ..... 98 No response 99	

5.0 NUMBERS AND TYPES OF PARTNERS

(Check Q. 403.1 and circle the response of Q.501 if necessary you may need to ask 403.1 once again and correct the response)

Q. N.	Questions	Coding Categories	Skip to

501.	Did you have sex with female regular partner (wife or live-in partner) during last 12 months?	Yes ..... 1 No ..... 2 → 502	
501.1	Think about your most recent female regular sexual partner. How many times did you have sex with her during last one-month?	Times ..... 98 Don't know ..... 99 No response	
501.2	The last time you had sex with a female regular partner did you and your partner use a condom?	Yes ..... 1 → 501.4 No ..... 2 Don't know ..... 98 → 501.4 No response 99	
501.3	Why did not you or your partner use a condom that time? **(Do not read the possible answers, multiple answer possible)**	Not available ..... 1 Too expensive ..... 2 Partner objected ..... 3 Don't like them ..... 4 Used other contraceptive ..... 5 Didn't think it was necessary ..... 6 Didn't think of it ..... 7 Other (Specify) 96 Don't know ..... 98 No response 99	
501.4	How often have you used a condom with female regular partners in the past year?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response 99	
501.5	Did your female regular partner also inject drugs?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
501.6	Have you ever had anal sex with your female regular partners?	Yes ..... 1 No ..... 2 Don't know ..... 98 → 502 No response 99	
501.7	The last time you had anal-sex with a female regular partner did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	

501.8	How often have you used a condom in an anal-sex with female regular partners in the past 12 months?	Every time ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response 99	
502	Did you have a sexual intercourse with a female sex worker in last 12 months? **(Check 403.2 and circle the response of Q. 502 *if necessary you may need to ask 403.2 once again and correct the response)***	Yes ..... 1 No 2	→ 503
502.1	Think about the female sex workers that you have had sex in the past one-month. In total how many female sex workers you sold sex in exchange for money or drugs?	Number ..... Don't know ..... 98 No response 99	
502.1.1	With how many sex workers you had sex in last month by paying them money or drugs?	Number ..... Don't know ..... 98 No response 99	
502.1.2	Where did you have sex with a last sex worker?	Hotel/lodge ..... 1 Own house ..... 2 Sex worker's house ..... 3 Injecting site ..... 4 Tea shop ..... 5 Park/garden ..... 6 Dance restaurant ..... 7 Massage parlor ..... 8 Bhatti pasal ..... 9 Dohori restaurant ..... 10 Don't Know ..... 9899 No response	
502.2	Think about your most recent female sex worker. How many times did you have sexual intercourse with her in the past one-month?	Times ..... Don't know ..... No response 98 99	
502.3	The last time you had sex with a female sex worker did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	→ 502.5 → 502.5

502.4	Why did not you and your partner use a condom that time? **(Do not read the possible answers, multiple answer possible)**	Not available 1 Too expensive 2 Partner objected 3 Don't like them 4 Used other contraceptive 5 Didn't think it was necessary 6 Didn't think of it 7 Other (Specify)_____ 96 Don't know 98 No response 99	
502.5	How often have you used a condom with female sex workers in the past year?	Every times 1 Almost every-times 2 Sometimes 3 Never used 4 Don't know 98 No response 99	
502.6	Do you know whether female sex worker with whom you had sex also injected drugs?	Yes 1 No 2 Don't know 98 No response 99	
502.7	Have you ever had anal sex with your female sex workers?	Yes 1 No 2 Don't know 98 No response 99	503
502.8	The last time you had anal-sex with a female sex worker did you use a condom?	Yes 1 No 2 Don't know 98 No response 99	
502.9	How often have you used a condom in an anal sex with female sex workers in the past 12 months?	Every times 1 Almost every-times 2 Sometimes 3 Never used 4 Don't know 98 No response 99	
503	Did you have a sexual intercourse with a female non-regular sex partner during last 12 months? **(Check 403.3 and circle the response of Q.503 *if necessary you may need to ask 403.3 once again and correct the response)***	Yes 1 No 2	→504
503.1	Think about your most recent female non-regular sexual partner. How many times did you have sexual intercourse with her over the past one-month?	Times…… Don't know 98 No response 99	

503.2	The last time you had sex with a female non-regular partner did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	~~503.4~~ ~~503.4~~
503.3	Why did not you and your partner use a condom that time? **(Don't read the possible answers, multiple answer possible)**	Not available ..... 1 Too expensive ..... 2 Partner objected ..... 3 Don't like them ..... 4 Used other contraceptive ..... 5 Didn't think it was necessary ..... 6 Didn't think of it ..... 7 Other (Specify)_____ 96 Don't know ..... 98 No response 99	
503.4	How often have you used a condom with a female non-regular partner in the past year?	Every times ..... 1 Almost every-time ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response 99	
503.5	Did you know whether your female non-regular partners also injected drugs?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
503.6	Have you ever had anal sex with your female non-regular partners?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	504
503.7	The last time you had anal sex with a female non-regular partner, did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
503.8	How often have you used a condom in an anal-sex with female non-regular partners in the past year?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response 99	
504	Have you had anal sex with a male partner in the past one year? **(See the response in Q. 404.1 and circle Q.504 response *if necessary you may need to ask 404.1 once again and correct the response)***	Yes ..... 1 No 2	~~505~~

504.1	Think of your last male sex partner with whom you had anal sex: in the last one month, how many times you had anal sex with him?	Times ..... Don't know ..... 98 No response 99	
504.2	The last time you had anal sex with him; did you use condom? **(Check answer in Q no 404.3)**	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	→ 504.4 504.4
504.3	Why didn't you use condom at that time? **(Don't read possible answer, multiple answer possible)**	Not available ..... 1 Too expensive ..... 2 Partner objected ..... 3 Don't like ..... 4 Used other contraceptive ..... 6 Didn't think it was necessary ..... 7 Didn't think of it ..... 8 Other (Specify)_____ 96 Don't know ..... 98 No response 99	
504.4	How often have you used a condom during anal sex with a male partner is the past year? **(Check Q no. 404.4)**	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response 99	
504.5	Do you know if your male partner with whom you had anal sex also injected drugs?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
504.6	Have you ever had sex in exchange for money or some commodities?	Yes ..... 1 No 2	→ 505
504.7	Before starting injecting drugs did you have sex in exchange for money or some commodities?	Yes ..... 1 No 2	
504.8	After starting injecting drugs did you have sex in exchange for money or some commodities?	Yes ..... 1 No 2	
504.9	Did you have sex in exchange for money or some commodities in the last 12 months?	Yes ..... 1 No 2	→ 505
504.10	In the last 12 month how many such sexual contacts did you have?	Number	
504.11	In the last 12 month how many such partners did you sell sex to?	Number	

505	Have you had sexual intercourse in the last month?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	507
505.1	If yes, did you or your partner use a condom when you had last sex in the last month?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
506	In the last month, how often did you or your partner use a condom when you had sex?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response 99	
507	With whom did you have the last sexual intercourse?	FSW ..... 1 Regular partner ..... 2 **(Wife or live in sexual partner)** Other female friend ..... 3 Male friend ..... 4 Did not have sexual contact in the past year ..... 5 Don't Know ..... 98 No response 99	→ 601
508	Did you use condom in the last sexual intercourse?	Yes ..... 1 No 2	

6.0 USE AND AVAILABILITY OF CONDOM

(Check responses in Q.N. 404.3, 404.4, 501.2, 501.4, 501.7, 501.8, 502.3, 502.5, 502.8, 502.9, 503.2,503.4, 503.7, 503.8, 504.4, 505.1, 506, 508 and circle responses in Q. 601 & 602and Probe if the response is contradictory)

Q. N.	Questions	Coding Categories	Skip to
601	Have you ever heard of a condom? **(Show picture or sample of condom) Probe if the response is No**	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	701
602	Have you ever used a condom?	Yes ..... 1 No 2	
603	Do you know of any place or person from which you can obtain condom?	Yes ..... 1 No ..... 2 No response 99	701

604	From which place or people, you can obtain condoms? **(Multiple answer possible. Don't read the list but probe)**	Shop ..... 1 Pharmacy ..... 2 Clinic ..... 3 Hospital ..... 4 Family planning center ..... 5 Bar/Guest house/Hotel ..... 6 Health worker ..... 7 Peer Educator/Outreach doctor ..... 8 Friend ..... 9 *Pan Pasal* ..... 10 Others (Specify)_____ 96 No response 99	
604.1	Did any organization give you condom in the last 12 months?	Yes, free of cost ..... Yes, by taking money ..... No	
605	How long would it take **(from your house or the place where you work)** to obtain a condom?	Less than 30 minutes ..... More than 30 minutes ..... Don't know ..... No response	
606	Do you usually carry condom with you?	Yes ..... No	
607	At this moment how many condoms do you have at-hand with you? **(Observe and write)**	Numbers .	

7.0 KNOWLEDGE AND TREATMENT OF STIs

Q. N.	Questions	Coding Categories	Skip to
701	Have you ever heard of diseases that can be transmitted through sexual intercourse?	Yes ..... 1 No ..... 2 No response 99	704
702	Can you describe any symptoms of STIs in women? **(Do not read possible answers, multiple answers possible.)**	Lower abdominal pain ..... 1 Genital discharge ..... 2 Foul smelling ..... 3 Burning pain on urination ..... 4 Genital ulcers/sore ..... 5 Swelling in groin area ..... 6 Itching ..... 7 Other (Specify)_____ 96 Don't know ..... 98 No response 99	
703	Can you describe any symptoms of STIs in men? **(Do not read possible answers, multiple answer possible)**	Genital discharge ..... 1 Burning pain on urination ..... 2 Genital ulcers/sore blister ..... 3 Swellings in groin area ..... 4 Others (Specify)_____ 96 Don't know ..... 98 No response 99	
704	Have you had genital discharge/burning urination during the last 12 months?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	705

704.1	Currently, do you have genital discharge / burning urination problem?	Yes ..... 1 No ..... 2 Don't know ..... 3 No response 4	
705	Have you had a genital ulcer/sore blister during the last 12 months?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	706
705.1	Currently, do you have genital ulcer/sore blister?	Yes ..... 1 No ..... 2 Don't know ..... 3 No response 4	
706	Last time you had a genital discharge/ burning urination or a genital ulcer/sore blister, where did you go for treatment?	Did not seek treatment ..... 1 With private doctor ..... 2 In hospital ..... 3 Never had such symptoms ..... 4 Others (Specify) 96	

8.0 KNOWLEDGE, OPINIONS AND ATTITUDES ON HIV/AIDS

Q. N.	Questions	Coding Categories	Skip to
801	Have you ever heard of HIV or the disease called AIDS? **(Probe if the response if No)**	Yes ..... 1 No ..... 2 No response 99	
802	Do you know anyone who is infected with HIV or who has died of AIDS?	Yes ..... 1 No ..... 2 No response 99	804
803	Do you have close relative or close friend who is infected with HIV or has died of AIDS?	Yes, a close relative ..... 1 Yes, a close friend ..... 2 No ..... 3 No response 99	
804	Can a person protect himself/herself from HIV,the virus that causes AIDS, by using a condom correctly during each sexual act?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
805	Can a person get HIV, from mosquito bites?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	

806	Can a person protect himself/herself from HIV, by having only one uninfected faithful sex partner?	Yes 1 No 2 Don't know 98 No response 99	
807	Can a person protect himself/herself from HIV, by abstaining from sexual intercourse?	Yes 1 No 2 Don't know 99 No response	
808	Can a person get HIV, by sharing a meal with someone who is infected?	Yes 1 No 2 Don't know 98 No response 99	
809	Can a person get HIV, by getting injections with a needle that was already used by someone else?	Yes 1 No 2 Don't know 98 No response 99	
810	Can a person who inject drug protect himself/herself from HIV, the virus that causes AIDS, by switching to non-injecting drugs? **(Oral or inhaling drugs)**	Yes 1 No 2 Don't know 98 No response 99	
811	Can a pregnant woman infected with HIV transmit the virus to her unborn child?	Yes 1 No 2 Don't know 98 No response 99	~~813~~
812	What can a pregnant woman do to reduce the risk of transmission of HIV to her unborn child? **(Do not read the possible answers, multiple answer possible)**	Take medication (Antiretroviral) 1 Others (Specify)_____ 96 Don't know 98 No response 99	
813	Can women with HIV transmit the virus to her newborn child through breast-feeding?	Yes 1 No 2 Don't know 98 No response 99	
813.1	Do you think a healthy-looking person can be infected with HIV?	Yes 1 No 2 Don't know 99	
813.2	Can a person get HIV by shaking hand with an infected person?	Yes 1 No 2 Don't know 99	
813.3	Can blood transfusion from an infected person to the other transmit HIV?	Yes 1 No 2 Don't know 99	

814	Is it possible in your community for someone to have a confidential HIV test? **(By confidential, I mean that no one will know the result if you don't want him or her to know it.)**	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
814.1	Do you know where to go for HIV test?	Yes ..... 1 No 2	
815	I don't want to know the result, but have you ever had an HIV test?	Yes ..... 1 No ..... 2 No response 99	901
816	Did you voluntarily take up the HIV test, or were you required to have the test?	Voluntary ..... 1 Required ..... 2 No response 99	
817	When did you have your most recent HIV test?	Within the past 12 month ..... 1 Between 13-24 months ..... 2 Between 25-48 months ..... 3 More than 48 months ..... 4 Don't know ..... 98 No response 99	
817.1	How many times have you undergone for HIV test within the last 12 months?	..... times	
818	Please do not tell me the result, but did you find out the result of your HIV test?	Yes ..... 1 No ..... 2 No response 99	901 901
818.1	Why did you not receive the test result?	Sure of not being infected ..... 1 Afraid of result ..... 2 Felt unnecessary ..... 3 Forgot it ..... 4 Others (Specify)_____ 96 No response 99	

9.0 AWARENESS OF HIV/AIDS

If answer to Q. 801 "No", Go to Q. 902)

Q. N.	Questions	Coding Categories		Skip to
901	Of the following sources of information, from which sources have you learned about HIV/AIDS? ***(Read the following list, multiple answers possible)***			
	Source of Information	**Yes**	**No**	
	1. Radio	1	2	
	2. Television	1	2	
	3. Newspapers/Magazines	1	2	
	4. Pamphlets/Posters	1	2	
	5. School/Teachers	1	2	
	6. Health Worker/Volunteer	1	2	
	7. Friends/Relatives	1	2	
	8. Work Place	1	2	
	9. People from NGO	1	2	
	10. Video Van	1	2	
	11. Street Drama	1	2	

	12. Cinema Hall	1	2	
	13. Community Event/Training	1	2	
	14. Bill Board/Sign Board	1	2	
	15. Comic Book	1	2	
	16. Community Workers	1	2	
	96. Others (Specify) _____			
902	Has anyone give you following information or items in the past year? ***(Multiple answer possible, read the list)***			
	Items	**Yes**	**No**	
	1. Condom	1	2	
	2. Brochure/Booklets/Pamphlets about HIV/AIDS	1	2	
	3. Information about HIV/AIDS	1	2	
	96. Others (Specify) _____			

10.0 PROMOTION OF CONDOM (If answer to Q. 601 "No" Go to Q. 1004)

Q. N.	**Questions**	**Coding Categories**		**Skip to**
1001	In the past one-year have you seen, read or heard any advertisements about condoms from the following sources? ***(Read the following list, multiple answer possible)***			
	Sources	**Yes**	**No**	
	1. Radio	1	2	
	2. Television	1	2	
	3. Pharmacy	1	2	
	4. Health Post	1	2	
	5. Health Center	1	2	
	6. Hospital	1	2	
	7. Health Workers/Volunteers	1	2	
	8. Friends/Neighbors	1	2	
	9. NGOs	1	2	
	10. Newspapers/Posters	1	2	
	11. Video Van	1	2	
	12. Street Drama	1	2	
	13. Cinema Hall	1	2	
	14. Community Event/Training	1	2	
	15. Bill Board/Sign Board	1	2	
	16. Comic Book	1	2	
	17. Community Workers	1	2	
	96. Others (Specify)			

1002	What message did you get from the advertisement? **(Below are the multiple possible answers that the respondent may answer. DO NOT READ the possible answers. Please circle to 1 if they mention and circle to 2 if they do not mention)**	Condoms should be used to prevent HIV/AIDS …….....1 Condoms should be used to Prevent STI…… .....2 Condoms should be used for family planning, …….....3 Condom should be used together with other FP methods…….....4 Others (Specify) _____96	
	Network size		
1003	Generally, where do you gather to inject drug? **(Type of injecting site and location too)**	|Forest/bushes……1 Open area/Planning area…2 Pond/river bank/slum area….3 Bus park…….4 School/campus/ground…...5 Camp/company……..6 Tunnel……7 Pool house/swimming pool...8 Garage/junkyard……..…..9 Public toilet……..10 Hotel/lodge/restaurant……11 Temple area……12 Vacant house……..…..13 Shop……..14 Near Airport ……15 Tole/Lane……16 Lonely place…….....17 Others(specify)_____96	
1004	How many IDUs do you know who also know you well? **(Knowing someone is defined as being able to contact them, and having had contact with them in the past 12 months)**	Total _____ Don't know.....98 No response 99	1008
1005.1	Among them, how many are male and female?	Male _____ Female _____ Don't know.....98 No response……99	
1006	Among those persons, please try to estimate the number of people by range of age:	Less than 15 years old . 15-19 years old ..... 20-24 years old..... 25-29 years old..... 30-40 years old..... > 40 years old.....	

1007	Again, among those, please try to estimate the number of people by religion:	Hindu ..... Buddhist..... Muslim..... Christian ..... Others (Specify) _____	
1008	How is the person who gave you the coupon related to you? **(Do not ask to the Seed)**	A close friend .....1 A friend .....2 Your sexual partner ..... 3 A relative .....4 A stranger .....5 Others (Specify)_____96 Don't know.....98 No response 99	
1009	In the past one year how many IDUs that you knew have died?	Numbers ..... Don't know.....98	

11.0 KNOWLEDGE AND PARTICIPATION IN STI AND HIV/AIDS PROGRAMS

Q. N.	Questions	Coding Categories	Skip to
1101	Have you met or discussed or interacted with Peer Educators (PE) or Outreach Educators (OE) or Community Mobilizes (CM) or Community Educators (CE) in the last 12 months?	Yes .....1 No .....2 No response .....99 →	1105
1102	What activities did these PE or OEs involve you in when you met them? **(Multiple answers. DO NOT READ the possible answers)**	Discussion on how HIV/AIDS is/isn't transmitted .....1 Discussion on how STI is/isn't transmitted ..... Discussion on safe injecting behavior .....2 Regular/non-regular use of condom .....3 Demonstration on using condom correctly .....4 Others (Specify)_____5 96	
1103	Do you know which organization were they from? **(Multiple answers. DO NOT READ the possible answers)**	NGOs (Specify)_____ Other (specify)_____ Don't know _____	
1104	How many times have these PE, OE, CM and/or CE met you in the last 12 months?	Once .....1 2-3 times .....2 4-6 times .....3 7-12 times .....4 More than 12 times 5 96	

1105	Have you visited or been to any out reach center(DIC, IC or CC) in the last 12 months? Drop-In Center (DIC), Information Center (IC), Counseling Center (CC)	Yes ..... 1 No ..... 2 → 1109	
1106	What did you do when you went to the out reach center (DIC, IC or CC) in the 12 last months? **(Multiple answers. DO NOT READ the possible answers)**	Went to collect condoms ..... 1 Went to learn the correct way of using condom ..... 2 Went to learn about the safe injecting behavior ..... 3 Went to watch film on HIV/AIDS ..... 4 Participated in discussion on HIV transmission ..... 5 Went to have new syringe ..... 6 Other (Specify _____ 96	
1107	Do you know which organizations run those out reach center (DIC, IC or CC)? **(Multiple answers. DO NOT READ the possible answers)**	NGOs (Specify) _____ Other (specify) _____ 96 Don't know _____ 98	
1108	How many times have you visited out reach centers (DIC, IC or CC) in the last 12 months?	Once ..... 1 2-3 times ..... 2 4-6 times ..... 3 7-12 times ..... 4 More than 12 times 5	
1109	Have you visited any STI clinic in the last 12 months?	Yes ..... 1 No ..... 2 → 1113	
1110	What did you do when you visited such STI clinic? **(Multiple answers. DO NOT READ the possible answers given below)**	Blood tested for STI ..... 1 Physical examination conducted for STI identification ..... 2 Discussion on how STI is/isn't transmitted ..... 3 Discussion on safe injecting behavior ..... 4 Regular/non-regular use of Condom ..... 5 Took a friend with me ..... 6 Other (Specify) _____ 96	
1111	Do you know which organizations run those STI clinics? **(Multiple answers. DO NOT READ the possible answers)**	Government sector (specify) _____ NGOs (Specify) _____ Other (specify _____	

1112	How many times have you visited STI clinic in the last 12 months?	Once ..... 1 2-3 times ..... 2 4-6 times ..... 3 7-12 times ..... 4 More than 12 times 5	
1113	Have you visited any Health Counseling and Testing (HTC) centers in the last 12 months?	Yes ..... 1 No ..... 2 →	1116.1
1114	What did you do when you visited such HCT center/s? **(Multiple answers. DO NOT READ the possible answers)**	Received pre-HIV/AIDS test counseling ..... 1 Blood sample taken for HIV/AIDS test ..... 2 Received post HIV/AIDS test counseling ..... 3 Received information on safe injecting behavior 4 Received HIV/AIDS test result ..... 5 Received counseling on using condom correctly in each sexual intercourse ..... 6 Received information on HIV/AIDS window period ..... 7 Took a friend with me ..... 8 Other (Specify) _____ 96	
1115	Do you know which organizations run those HTC centers? **(Multiple answers. DO NOT READ the possible answers)**	Government sector (specify) _____ NGOs (Specify) _____ Other (specify) _____	
1116	For how many times have you visited HTC center in the last 12 months?	Once ..... 1 2-3 times ..... 2 4-6 times ..... 3 7-12 times ..... 4 More than 12 times 96	
1116.1	Have you ever received any Opioid substitution Therapy (OST)?	Yes ..... 1 No ..... 2 Don't Know ..... 98 No response 99 5	1117
1116.2	Have you received any Opioid substitution Therapy (OST) in the past 12 months?	Yes ..... 1 No ..... 2 Don't Know ..... 98 No response 99	1117
1116.3	Which service have you received?	Methadone ..... 1 Bupenorphine 2	
1116.4	Are you still in therapy?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	1117

1116.5	What amount have you been receiving per day?	Methadone ……..ml Or Buprenorphine … ….. mg.	
1116.6	How long have you been in this therapy?	……Years …… Months	
1117	Have you ever heard about prevention of mother to child transmission services (PMTCT) for pregnant women?	Yes 1 No 2 Don't know 98 No response 99	1118
1117.1	Do you know from where pregnant women can get PMTCT services?	Yes 1 No 2 Don't know 98 No response 99	1118
1117.2	If Yes, please specify	Government sector (specify)_____ NGOs (Specify)_____ Other (specify)_____	
1118	Have you ever heard about anti-retroviral therapy (ART) services for HIV positive individuals?	Yes 1 No 2 Don't know 98 No response 99	1119
1118.1	Do you know from where HIV positive individuals can get ART services?	Yes 1 No 2 Don't know 98 No response 99	1119
1118.2	If Yes, please specify	Government sector (specify)_____ NGOs (Specify)_____ Other (specify)_____	
1119	Have you heard of viral load testing services for HIV positive individuals?	Yes 1 No 2 Don't know 98 No response 99	1120
1119.1	Do you know from where HIV positive individuals can get viral load testing services?	Yes 1 No 2 Don't know 98 No response 99	1120
1119.2	If Yes, please specify	Government sector (specify)_____ NGOs (Specify)_____ Other (specify)_____	
1120	Have you heard of any Community Home Based Care (CHBC) services that are provided for HIV positive people?	Yes 1 No 2	

12.0 STIGMA AND DISCRIMINATION

Q. N.	Questions	Coding Categories	Skip
1201	If a male relative of yours gets HIV, would you be willing to take care of him in your household?	Yes ..... 1 No ..... 2 Don't know 98	
1202	If a female relative of yours gets HIV, would you be willing to take care of her in your household?	Yes ..... 1 No ..... 2 Don't know 98	
1203	If a member of your family gets HIV, would you want to keep it a secret?	Yes ..... 1 No ..... 2 Don't know 98	
1204	If you knew a shopkeeper or food seller had HIV, would you buy food from him/her?	Yes ..... 1 No ..... 2 No response 99 99	
1205	Do you think a person with HIV should get the same, more or less health care than someone with any other chronic disease?	Same ..... 1 More ..... 2 Less ..... 3 Don't know ..... 98 No response 99	
1206	If one of your colleagues has HIV but he/she is not very sick, Do you think he/she should be allowed to continue working?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
1207			

Thank You!!

Annex – 5: Clinical/Lab Checklist

CONFIDENTIAL
INTEGRATED BIO-BEHAVIORAL SURVEY (IBBS) AMONG INJECTING DRUG USERS IN SELECTED SITES OF NEPAL

	Clinical/Lab Checklist		
Respondent ID Number:			Date:/__/__
Name of Clinician: ____			
Name of Lab Technician: ____________________________________			
(A) Clinical TEST	(B) Specimen collection		
		Yes	**No**
Weight : __________Kg	Pre-test counseled	1	2
B.P. : _______mm of Hg	Blood Collected for		
	HIV , HCV, HBV and Syphilis,	1	2
Pulse : ____________	Date & place for		
	post-test results given	1	2
Temperature : ___________ º F	Condom given	1	2
	IEC materials given	1	2

1.0 Syndromic Treatment Information

101. Have you experienced genital discharge/burning urination/swelling and tenderness of test is or epididymis in the past one month?

1. Yes 2. No

[If yes, give urethral discharge/scrotal swelling syndrome treatment]

102. Have you had genital ulcer/sore blister in the past one month?

1. Yes 2. No

[If yes, give genital ulcer syndrome treatment and time for follow-up]

103. Have you had a tender or non-tender/solid or fluctuant swelling in the groin area in the past one month?

1. Yes 2. No

[If yes, give inguinal swelling (bubo) syndrome treatment and time for follow-up]

Annex – 6: Oral Informed Consent From for people who Inject Drugs

Integrated Biological and Behavioral Surveillance Survey among People Who Inject Drugs

Namaste! My name is ....., I am here from ……to collect data for a research survey. This survey is being conducted by National Centre for AIDS and STD Control (NCASC), Ministry of Health and Population. During this interview, I will ask you some personal questions that will be about sexual behavior, use and promotion of condoms, STI/HIV/AIDS and use of drugs and needle/syringes. You may feel uncomfortable to answer some questions relating to your personal behavior, but it is important that you provide correct information. We will also take about 5-7 ml blood sample for testing HIV and syphilis infection. If it is determined that you have any STI symptoms, we will provide treatment free of charge. We also will treat for syphilis on the basis of RPR test on the same day of interview. The information given by you will be strictly treated as confidential. Nobody will know whatever we talk about because your name will not be mentioned on this form and collected samples. All the mentioned information will be used only for the survey purpose. This survey will take about an hour.

It depends on your wish to participate in this survey or not. You do not have to answer those questions that you do not want to answer, and you may end this interview at any time you want to. But I hope you will participate in this survey and make it a success by providing correct answers to all the questions.

Would you be willing to participate?

1. Yes	2. No						
Signature of the interviewer:			Date:		/		/2072

Annex – 7: Tables

Annex Table 7.1; Reasons for Not Injected Drugs on the Previous Day

	N=203	%	CI
Reasons for not injecting yesterday			
Lack of money	95	36.2	
Reduce the use of drugs	49	22.6	
Busy in housework	12	8.2	
Used another medicine	10	4.5	
Took Nitrosun orally	10	8.1	
Smoke Ganja	6	5.9	
Unavailable of drugs	5	1.4	
Injected last day	5	2.7	
Consume brown sugar	5	2.1	
Drank alcohol	3	3.9	
Illness	1	1.0	
No response	2	2.5	

Note: Out of 340 PWID 137 were found not injected drugs on the previous day
** Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI*

Annex Table 7. 2: Part of the Body for Injecting Drugs

	N	%
Typical Injection Points		
Femur	238	70.0
Wrist	55	16.2
Arm	43	12.6
KAKHI	1	.3
Thai	1	.3
Calf	1	.3
No response	1	.3
Total	**340**	**100.0**

Annex Table 7. 3: Gathering Place to Inject Drugs

	N=340	%
Gathering Places of PWID to Inject Drugs		
Own/friend's house/room/toilet	128	37.6
Forest/bushes	66	19.4
Vacant house	42	12.4
Lonely place	28	8.2
River side/pond/ slum area	18	5.3
Hotel/ Lodge/ restaurant	11	3.2
Public toilet	11	3.2
Chok/galli	10	2.9

School/campus/ground	10	2.9
Open area/ Planning area	6	1.8
Shop	3	.9
Temple area	3	.9
Sathi Samuha	2	.6
Around airport	1	.3
Pool house/ swimming pool	1	.3

Annex Table 7. 4: Combination of Different Drugs Injected

	N
Diazepam, Phenergan	24
Avil, Norphin, Phenergan, Diazepam	19
Diazepam, Norfin, Phenargan	16
Norphin, Phenergan, Diazepam,Staigon	13
Norphin, Phenergan, Diazepam,Avil, Staigon	10
Phenergan, Diazepam,Avil, Staigan	8
Norphin, Diazepam, Stagon	7
Tidigesic, Phenargan, Diazepam	7
Phenergan, Diazepam,Avil	6
Lupigesic, Phenergan, Diazepam	5
Norphin, Stargan	4
Norphin, Phenergan, Diazepam,Lupgesic	4
Stargan, Avil	4
Methodone	3
Norphin, Diazepam	3
Opidol,Staigon	3
Phenergan, Stargon	2
Avil,Phenergan	2
diazepam, phenargan, nitrosun	2
Diazepam,Avil, Stargon	2
Lupigesic, Phenergan, Diazepam	2
Norfin	2
Opidol	2
Norphin, Stagon, Avil	1
Avil, Stargan, Phenargan	1
brown sugar, diazepam, phenargan	1
brown sugar, vitamin c, water	1
Brown sugar,Vitimen E	1
Brown sugarStiger,Phenargan	1
Brufin, Norphin, Saigon, Phenargan	1
Brufin, Norphin, Tidigesic	1
Burphin, Norphin, Phenergan, Diazepam	1
Calmpose, Phenergan, Diazepam	1
Clonage,clogap	1
Cranaj	1

Diazepam, Compose, Codein, Norphin	1
Diazepam, Cronaj, Stargon	1
Diazepam, Norfin, Brufin	1
Diazepam, Norfin, Nimddol	1
Diazepam, Phenargan, Lupijesic, Stargon, Tidijesic	1
Diazepam, Phenargan, Nitrosun, Stigon	1
Lupijesic	1
Nitrosun	1
Nitrosun, Proxygin, nitrovate	1
Nitrovate,Nitrosen,Opidon, Tidigesic	1
Nitrovet,Nitrosen,Phenargan, Tidigesic	1
Norfin, Diazepam, Phenargan, Trama, Stargon	1
Norfin, Diazepam,, Stigon, Avil	1
Norfin, Opidole	1
norfin, phenargan, diazepam, nitrosun	1
Norphin, Browan sugar, Diazepam	1
Norphin, Phenargan,Diazepam, Avil, Stargon,Saifan,	1
Norphin, Phenergan, Diazepam, Avil,phernarmin	1
Norphin, Phenergan, Diazepam, Brufin	1
Norphin, Phenergan, Diazepam, Phenermin	1
Norphin, Phenergan, Diazepam,Stargan,Lysergic	1
Norphin, Phenergan, Diazepam,Stragan,Brokodine	1
Norphin, Phenergan, Stargan	1
Nuphim, Lupijesic	1
opidol, captyapdi,Dibomine,Cronaj,phenargan,stragan,Brufin	1
Opidol, Coftab	1
Opidol, Paaj	1
Opidol, Spa, kafadi	1
Opidol, Stigon, Capflad	1
Opidol,Kopaljepu	1
Opidol,Staigon, Avil,Devomin	1
Opidole, Alpha jalan, Cyonaj, Stagon	1
opidole, captyapdi, sinex	1
Proxygian, opidol, Nitrosun	1
Stagon, Cuprack, Debomine, Drama	1
stargon, sparpen, captyadi, setron	1
Stigon, Epidone, Phenargan	1
Stragan, Diazepam,Nunagan	1
Stragan,Cufim, Avil	1
Trama,, opidole, Anargan, Phenargan, Stagon	1
Others	58

Annex Table 7. 5: Main Drugs Injected

	N
Norphin, Phenergan, Diazepam	81
Diazepam, Phenargan	27
Norphin, Diazepam	25
Norphin, Diazepam, Stragan	14
Norphin, Diazepam, Stagon	14
Phenergan, Diazepam,Stargon	9
Diazepam, Phenargan, Lupijesic	8
Avil, Norphin, Phenergan, Diazepam	7
Norphin, Phenergan, Diazepam,Avil	5
Avil,Phenergan	4
Avil, Stargon	4
Avil, Stargan, Phenargan	3
Diazepam, Norfin, Avil	3
Diazepam, Phenargan, Avi	3
Norphin, Phenergan	3
Phenergan, Stargan	3
Diazepam,Avil, Stargon	2
Phenergan, Diazepam,lupijesic	2
Phenergan, Diazepam,Stargan	2
Stigon, Opidole, Phenargan	2
Tidijesic, Diazepam	2
Avil , Diazepam	1
Brown Sugar	1
brown sugar, vitamin c	1
Brown sugar,Vitimen E	1
Brown sugarStiger,Phenargan	1
Brufin, Tidigesic	1
Burphin, Norphin, Phenergan, Diazepam	1
captyapdi, trama, stargon, sparsen	1
Compose,Phenargan	1
Debomine, Drama, Stargon, Cuprack	1
Diazepam, Phenargan, Nitrosun	1
Diazepam, Phenargan, Nitrosun, Stigon	1
Diazepam, Phenargan, Nitrovate	1
Diazepam, Staigan, Evidol	1
Diazepam, Stargon, Cronaj	1
Diazepam, stigon	1
Foxigin, Opidole	1
Luphin, Phenagan	1
Nitrosun	1
Nitrosun, Nitrovate, Diazepam	1
Nitrosun, Proxygin, nitrovate	1

Norphin, Diazepam, Lubrejesic, Stargan	1
Norphin, Browan sugar, Diazepam	1
Norphin, Phenergan, Diazepam, Avil,Swagan	1
Norphin, Phenergan, Diazepam, Lupsigesic	1
Norphin, Phenargan,Diazepam, Avil, Stargon,Saifan,	1
Norphin, Phenergan, Diazepam, Phenermin	1
Norphin, Phenergan, Stargan	1
Norphin, Stagon, Avil	1
Norphin, Stargan	1
Norphin,Nitrosum	1
Opidol, Paaj	1
Opidol, Spa, kafadi	1
Opidol,Kopaljepu	1
Opidol,Staigon	1
Opidole, captyapdi, stagon	1
opidole, stargon, cronaj	1
Opidole, Trama, Coptapdy	1
Phenargan, Lupijesic	1
Phenergan, Diazepam, Avil,Swagan	1
Phenergan, Diazepam,Avil, Stargon	1
Phenergan, Diazepam,Avil,Algic	1
Phenergan, Tidigesic,Norphin	1
Phenergan,Staigon, Avil	1
Phergan,Stragan,Brufin	1
Spas, Opidol,Avil,Stragan	1
Stargan, Avil	1
stargon, avil, phenargon, opidole	1
Tidigesic, Phenergan, Diazepam	1
Stragan, Norphin, Brufin,Phenargan	1
Tidigesic, Brown sugar	1
Tidigic,phenargan, Buskofam	1
Trama, Opidole	1

Annex Table 7. 6: Drug switched from to

Before used Drugs	**N**	**Currently used drugs**	**N**
Brown Suger	4	Methadone	4
Norphin, Phenergan, Diazepam	3	Pill Cuptap phaxyone	1
Phenargan	2	Stargan	3
Tidigesic	3	brunofin, tablet	3
Diazepam, Phenargan, Stargon	1	Nitrovat	1
Opidol, ultivitamin, CTZ	1	Pranjan	1
Proxygian	2	Norphin, Diazepam	1
Stragan	2	opidole, stargon, cronaj	1
barkodin	1	Evidol	1

Diazepam	2	Norphin, Brophin	1
		Phenargan, Diazepam	1
		Avil, Supijesic	1

Annex Table 7. 7: Reasons for Not Using Condom in the Last Sex with Different Sex Partners

	N	%
Reason of not using condom with regular female sex partner during last sex *		
Didn't think it was necessary	40	66.7
Don't like them	14	23.3
Partner objected	4	6.7
Didn't think of it	3	5.0
Used other contraceptive	3	5.0
No response	1	1.7
Not available	1	1.7
Others	4	6.7
N	**60**	**100.0**
Reason of not using condom with female sex worker during last sex *		
Not available	8	57.1
Didn't think of it	6	42.9
Don't like them	5	35.7
Didn't think it was necessary	2	14.3
N	**14**	**100.0**
Reason of not using condom with non-regular female sex partner during last sex *		
Didn't think it was necessary	28	40.0
Don't like them	25	35.7
Not available	16	22.9
Didn't think of it	10	14.3
Partner objected	6	8.6
Others	4	5.7
N	**70**	**100.0**

** Percentage total may add up to 100 because of multiple responses*

Annex Table 7. 8: Had Sex in Exchange for Money or Drugs

	N=340	%
Ever had sex for money or goods		
Yes	1	.3
No	339	99.7
Had sex for money or goods before started injecting drugs		
No	340	100.0
Had sex for money or goods after started injecting drugs		

Yes	1	.3
No	339	99.7
Had sex for money or goods in the past one year		
Yes	1	.3
No	339	99.7
Frequency of sex with such partners in the past one year		
None	339	99.7
3	1	.3
Number of such sex partners in the past one year		
None	339	99.7
5	1	.3

Estimated population Proportion (%) of the variables with asterisk (*) did not meet the required numerator to be calculated with RDSAT. The proportion represented is therefore unadjusted and no value is mentioned under CI

Annex Table 7. 9: Distribution of Respondents Reached by OE/PE by Use of Other Services

	N=340	%	CI
DIC visit			
Yes	216	57.7	53.6-66.5
No	124	42.3	33.5-46.4
HTC visit			
Yes	80	19.8	17.3-26.7
No	260	80.2	73.3-82.7
STI clinic visit			
Yes	6	2.1	0.3-4.5
No	334	97.9	95.5-99.7