

**Integrated Biological and Behavioural Surveillance (IBBS)
Surveys among People Who Inject Drugs (PWID) in Eastern
Terai Highway Districts**

Round VII-2017



**Ministry of Health
National Centre for AIDS and STD Control
Teku, Kathmandu**

ACKNOWLEDGEMENT

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

The NCASC team helped ensure the work was carried out efficiently and scientifically. Mr. Bir Bahadur Rawal, Statistical Officer, NCASC, Mr. Keshab Deuba, Strategic Information Specialist, Mirak Raj Angdembe, FHI and Komal Badal, UNAIDS primarily provided the technical support required to ensure proper planning and monitoring of the survey. The survey was successfully completed with support from stakeholder organizations and different individuals. From the outset, we received support from various NGOs and community experts working with PWID namely – KYC, Recovering Nepal, Richmond, Namuna and other stakeholders. We thank the staff of Nepal Public Health Laboratory (NPHL) for carrying out quality control assessments of serological tests from biological samples received during the study.

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We are confident that the findings of this survey will provide crucial evidence regarding the ground realities of HIV/AIDS, HCB/HCV and STIs in Nepal. Further more, we believe that the results will aid in framing policies for reducing prevalence of HIV/AIDS and improving HIV/AIDS related prevention stratagem.

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ABBREVIATIONS

ABC	: Abstinence, Being Faithful, Condom Use
AIDS	: Acquired ImmunoDeficiency Syndrome
ART	: AntiRetroviral Therapy
BSS	: Behavioral Surveillance Survey
CC	: Community Centers
CHBC	: Community and HomeBased Care
CI	: Confidence Interval
CMs	: Community Motivators/Mobilisers
DIC	: DropinCentre
EQA	: External Quality Assessment
EQAS	: External Quality Assurance Scheme
FSW	: Female Sex Worker
GOs	: Governmental Organizations
HTC	: HIV Testing and Counseling
HIV	: Human ImmunoDeficiency Virus
IBBS	: Integrated Biological and Behavioral Surveillance
IC	: Information Center
ID	: Identifier
KAP	: Key Affected Population
LSD	: Lysergic acid diethylamide
NCASC	: National Center for AIDS and STD Control
NGO	: NonGovernmental Organization
NHRC	: Nepal Health Research Council
NPHL	: National Public Health Laboratory
OE	: Outreach Educator
PE	: Peer Educator
PHCC	: Primary Health Care Center
PLHIV	: People Living with HIV
PMTCT	: Prevention of Mother to Child Transmission of HIV
PPS	: Probability Proportional to Size

PWID	:	People Who Inject Drugs
RDT	:	Rapid Diagnostic Test
RPR	:	Rapid Plasma Regain
SGS	:	Second Generation Surveillance
SITWG	:	Strategic Information Technical Working Group
SPSS	:	Statistical Package for the Social Sciences
STI	:	Sexually Transmitted Infection
TPHA	:	Treponema Pallidum Hemagglutination Assay
TPPA	:	Treponema Pallidum Particle Agglutination
UNAIDs	:	Joint United Nations Programme on HIV/AIDS
USAID	:	United States Agency for International Development
UNGASS	:	United Nations General Assembly Special Session
WHO	:	World Health Organization

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EXECUTIVE SUMMARY

Introduction

HIV in Nepal is characterized as a concentrated epidemic. Nepal is categorized as a country facing concentrated HIV epidemic. The National Centre for AIDS and STD Control (NCASC) has estimated that there were 39,249 people living with HIV (PLHIV) in Nepal in 2014 with adult HIV prevalence 0.20% (NCASC, 2014). The National HIV/AIDS strategy 2011-2016 has adopted strengthening of the Second Generation Surveillance (SGS) system as one of the key principles of strengthening surveillance of HIV and STI in Nepal. One of the major components of SGS, and also the strategic direction of the national strategy, is to conduct Integrated Biological and Behavioural Surveillance (IBBS) among key populations at higher risk for HIV in selected high-risk areas in the regular interval based on the national plan on HIV and STI surveillance.

IBBS surveys have been successfully conducted in various rounds in Nepal for the last about a decade among key populations at higher risk for HIV. Different round of IBBS was successfully carried out under the leadership of NCASC with support from USAID, Global Fund and Pooled Fund. Evidence from different rounds of IBBS surveys carried out in Nepal suggest that HIV prevalence is still high among PWID compared to other Key population such as Female Sex workers (FSW) and Male having sex with Male (MSM). This is seventh round of IBBS surveys among PWID in Eastern Terai Highway Districts.

Methodology

This descriptive serial cross-sectional study was conducted among PWIDs from Eastern Highway Districts namely Jhapa, Morang, Sunsari, for this survey, the definition of a PWID was "*Male aged 16 years or above who had been injecting drugs for at least three months prior to the date of the survey*".

A two stage cluster sampling was used to recruit 360 PWIDs from 3 eastern districts. A site or hotspot with at least 30 PWIDs was defined as a cluster. To make sure proper representation of the survey population, out of 68 clusters, 30 clusters were selected from 3 highway districts, in the second stage, 12 PWIDs were selected from each cluster using systematic random sampling method.

The research was conducted in compliance with both ethical and human rights standards. Ethical approval for this survey was permitted by Nepal Health Research Council. Informed consent was obtained from the PWIDs in the presence of a witness who signed on their behalf prior to the interview and collection of blood samples. Survey centers with laboratories/clinics were set up at easily accessible locations in each study district. Individual interviews, clinical examinations, and blood collection were carried out in separate rooms at each of the study centers.

Laboratory Methods

HIV testing was done using Determine HIV 1/2 as the primary method for detecting antibodies against HIV. If the first test presented a negative result, no further tests were conducted. However, if

the first test was positive, a second and third test was performed using UniGold and Stat Pak HIV 1/. Syphilis was tested using the Rapid Plasma Reagin (RPR) test card and confirmed using the Serodia Treponema Pallidum Particle Agglutination (TPPA) test. Serum samples that tested RPR positive with titer value above or equal to 1:8 were reported as active syphilis; titration less than 1:8 were reported as a case with the history of syphilis. HCV and HBsAg were done using rapid test kits.

Key Findings

Prevalence of HIV and Syphilis

HIV prevalence among PWID was 3.3 percent. HCV prevalence among them in 2017 found to be 38.1 percent. Likewise, HBC prevalence among PWID was 0.8 percent. Among the total respondents, STI prevalence was found to be 1.9 percent.

Background Characteristics

Majority of the PWIDs (88.1%) were below 35 years and literate (93.6%). The representation of both disadvantaged Jana jati ethnic groups and upper caste groups was high (72%). Less than half of the PWIDs (44.4%) were married. Among the married PWIDs, 29.1 percent had got married before the age of 19. Most PWIDs (66.1%) were living with their female sexual partner. Moreover, among the married PWIDs, about 72.5 percent were living with their wife.

Sexual Behaviors of PWIDs

Majority of PWIDs (94.2%) in the survey reported being ever involved in sexual activity. Most of them had their first sexual intercourse before age 20 (82.9%). Half of the PWIDs (50.2%) have more than one female sex partner.

Drug Injecting Practice of PWIDs

The survey indicated that 40.3 percent PWIDs had been injecting drugs for more than 5 years while 30.8 percent had been injecting for past 2-5 years. A low number of respondents (7.5%) had started injecting drugs more recently, within a year. Majority of the PWIDs (72.2%) had injected for the first time at the age of 16-24 years. As for the frequency of injections in the last day prior to the survey, 46.1 percent of respondents reported that they injected more than once in the last day. Majority of the PWIDs (97.6%)(N=45) shared a needle with friend in the last week.

Consistent Condom Use with Different Partners

More than half of the PWID (58%) reported using the condom every time with female sex workers in the past year. In case of regular female sex partner, most of the PWID (72.9%) used condom in the last sex. Majority of PWID (72.3%) did not have sexual intercourse with female non regular sex partner in last 12 months. More than half of the PWID (68.4%)(N=247) did not used condom in the last sexual intercourse in the past one year.

Comprehensive knowledge on HIV

More than half of the PWIDs (60%) correctly identified all three ABCs (A. Abstaining from sex; B. Being faithful to one partner/avoiding multiple sex partners; C. Consistent condom use or use of condom during every sex act) as HIV preventive measures. However, comprehensive knowledge and misconceptions related to HIV among PWIDs, less than half of them (49.4%) correctly identified all five 'BCDEF' (D. a healthy looking person can be infected with HIV; E. HIV cannot be transmitted through a mosquito bite; F. HIV cannot be transmitted while sharing a meal with an HIV positive person).

Exposure to ongoing HIV Awareness Programs

Less than one fourth (13.6%) had met a Peer Educator/Outreach Educators (PE/OE) in the last 12 months. In addition, 34.7 percent of the PWID had visited a Drop in Clinic (DIC) in the past year. About 2 percent of PWID (1.9%) had visited an STI clinic, and only 1.4 percent of them had visited an HTC center within the last year.

Knowledge on PMTCT, ART, Viral Load and CHBC Services

About 12 percent of PWID (12.2%) reported having heard about prevention of mother to child transmission (PMTCT) services. Only 25.6 percent of PWID had heard about antiretroviral therapy (ART) services, and 15.3 percent of PWID knew from where HIV positive can get ART services. About 13 percent of PWID (13.3%) had knowledge of viral load testing services for PLHIV. When asked if they had heard about CHBC services, more than one fourth of the PWID (26.4%) responded that they were aware of CHBC services provided for PLHIV.

Program Implications and Recommendations

Based on the findings from this study, the following program implications and recommendation are discussed.

- Although the prevalence of HIV has been decreasing in recent rounds of IBBS surveys, there are still some PWID suffering from HIV infection. Targeted outreach programs are needed to reach PWID and bring them for treatment to prevent HIV transmission. According to the data, the prevalence of syphilis has increased from the previous rounds. Intensified and focused programs on STI awareness which incorporates GOs, and I/NGOs is needed to reduce the prevalence of syphilis in the study districts. There is a need for further research to explore the factors for the sudden rise in prevalence of syphilis.
- Exposure to ongoing HIV programs and services (peer education, DICs, HTC clinics etc.) were found to be decreasing as compared to previous rounds of IBBS surveys. Targeted interventions among PWID with the provisions of peer and outreach education, partnerships with HTC/STI clinics, and the inclusion of care and support are necessary for increasing exposure of the PWID to the programs and services related to HIV and AIDS.
- The comprehensive knowledge (ABC), and comprehensive knowledge and misconceptions (BCDEF) of the PWID has increased in 2017 as compared to the data from 2012 and 2016. Therefore, comprehensive knowledge, education, and awareness regarding HIV/ should be promoted through multiple channels.

CHAPTER I: Introduction

1.1 Introduction

In Nepal, the spread of Human Immunodeficiency Virus (HIV) is concentrated among Key Populations (KPs) comprising of people who inject drugs (PWID), men who have sex with men (MSM), labor migrants, spouses, and Female Sex Workers (FSWs). The transmission of HIV is largely driven by KPs and consequential health risk behaviors. The Integrated Biological and Behavioral Surveillance (IBBS) survey is a descriptive serial cross sectional survey conducted to monitor trends in HIV and STI prevalence and to explore behavioral information from high risk groups. Behavioral surveillance is a systematic and ongoing collection of data about risk behaviors related to disease and health conditions, with the purpose of correlating trends in behavior with changes in disease over time. In biological surveillance, biological samples are collected and tested for HIV and other related illnesses. In Nepal, the National Center for AIDS and STD Control (NCASC) aims to track patterns of HIV incidence and prevalence, STI related awareness, and risk behaviors among KAPs. A standardized format of the questionnaire is used for each group, which is repeated with relevant modification in the following rounds of the survey to explore behavioral changes over time (NCASC, 2016).

In Nepal, the HIV epidemic is driven by major three causes; injecting drug use, sex work and migration. Injecting drug use is one major risk behavior that often triggers the transmission of HIV and AIDS among the population who practice injecting habits. Injection of drugs is strongly linked to HIV because of the higher rate of HIV transmission through needles. Syringe use and needle sharing habits are one of the key behavioral factors that act as the principle driver in the transmission of HIV and other blood borne pathogens. Findings obtained from the previous IBBS surveys have shown that the prevalence of HIV in PWID ranges from 35.1 percent in 2003, 32 percent in 2005 to 8.3 percent in 2015 in Eastern Terai districts pathogens. Although the prevalence is on a decreasing trend, the current status of HIV among PWID cannot be ignored. Thus the investigation of prevalence of HIV and social and behavioral correlates of HIV infection among PWID in Nepal is crucial. Moreover, PWID also possess high risk behavior of sharing needles/syringes between different injecting partners and also re-using needles kept in public places.

IBBS surveys have been successfully conducted in various rounds in Nepal for the last about a decade among KAPs at higher risk for HIV. Different round of IBBS surveys were successfully carried out under the leadership of NCASC with support from USAID, Global Fund and Pooled Fund. Evidence from different rounds of IBBS surveys carried out in Nepal suggest that HIV prevalence is still high among PWID compared to other KAPs such as FSWs, MSM and migrants. This is seventh round of IBBS surveys among PWID in Eastern Terai Highway Districts.

1.2 Objectives of the Study

The primary objectives are:

- To track the trend in the prevalence of STI and HIV infection among PWID in Eastern Terai Highway districts.
- To determine the prevalence of Hepatitis B and Hepatitis C among PWID in Eastern Terai Highway districts.
- To assess the sexual and injecting behaviors related to HIV and STI among the survey populations in the selected study areas.

The secondary objectives are:

- To determine socio-demographic characteristics among PWID in Eastern Terai Highway districts.
- To estimate the knowledge of HIV/STI as well as sexual and injecting behaviors among PWID in Eastern Terai Highway districts.
- To explore exposure to HIV and AIDS programs among PWID in Eastern Terai Highway districts.
- To estimate the prevalence of STI syndromes among PWID.

1.3 Rationale for the Study

IBBS Surveys are a strong component of HIV surveillance whose findings are widely used in designing HIV response, monitoring HIV prevention, care and treatment programs and estimating and projecting HIV infections throughout the world. These are the major source of information used by donors, policymakers, program designers, implementers, academicians and civil society organizations in order to track the level of HIV epidemic and related risk behaviours in Nepal. As a key component of national HIV surveillance plan of Nepal, IBBS is conducted at a regular interval in Nepal. Data on key National HIV Indicators (outcome and impact), as well as estimation and projection of HIV infections in the country, are heavily based on IBBS survey data. Likewise, IBBS are a major source of information for understanding the HIV dynamics including behavior as well as prevalence of HIV and STI among KAPs. Similarly, key UNGASS indicators were also calculated and reported using the IBBS survey data.

The goal of IBBS surveys is to guide HIV prevention planning and resource allocation and to inform the development of effective HIV prevention interventions for KAPs. Periodic IBBS with sub-populations helps to design and implement timely intervention strategies and monitor the changes in diversity and effectiveness of existing interventions in controlling the epidemic. IBBS is a major source of information for understanding the HIV dynamics including behavior as well as HIV and STI prevalence among KAPs. IBBS survey is a key component of the national HIV surveillance plan of Nepal and is collected at regular intervals. Estimation and projection of HIV infections in the country are also heavily based on IBBS surveys data. Indeed, IBBS survey has established its reputation for quality and is the major set of surveillance data in Nepal

With this evidence of importance, NCASC and Save the Children, through the support of Global Fund for AIDS, Tuberculosis, and Malaria (GFATM), conducted the seventh round of IBBS Surveys among PWID in three Eastern Terai Highway districts (Jhapa, Morang and Sunsari). We are hopeful that the results obtained from the survey will be utilized by policy makers, program planners, and

implementers to mobilize the national HIV response towards addressing the current epidemic in Nepal. Furthermore, we envision the study findings will be pivotal in guiding policy makers and program managers for identifying the useful points and areas to target and focus intervention strategies at different groups of PWID.

CHAPTER II: Methodology

2.1 Survey design

The survey was descriptive serial cross-sectional in design.

2.2 Survey Population

The study population of the survey was "Male aged 16 years or above who had been injecting drugs for at least three months prior to the date of the survey."

2.3 Survey Site

This survey was conducted in Eastern Terai Districts namely Jhapa, Morang and Sunsari.



2.4 Survey Period

The fieldwork for the survey started on 16th March 2017 and was completed on 12th April 2017.

2.5 Sample Design

Two stage cluster sampling method was used to select the PWID.

First Stage: Selection of Clusters

The information on the estimated size of the PWID within each district was based on the "Mapping and size estimations report 2016" carried out by NCASC.

A site or hotspot with at least 30 PWID was defined as a cluster. Based on the report of mapping and size estimations report 2016, a list of locations and an estimated number of PWID for each location was prepared. The sites with less than 30 estimated PWID were combined with a neighbouring site to form a full cluster, with a minimum number of a cluster not exceeding 30 PWID. The clusters were arranged in serpentine order based on location starting from Jhapa to Morang. Altogether 68 clusters were identified from this region. Among them, 30 clusters were selected from using systematic

random sampling method with the probability proportional to size (PPS) method. The selected clusters along with map are presented in the annexure.

Second Stage: Selection of PWID

The field teams visited each of the selected clusters to prepare a list of PWID who met the eligibility criteria for the study. Only those PWID who were available in the clusters of the study districts were included in the list. 12 PWID were selected by systematic random sampling method from each of the respective clusters. This resulted in the selection of a total of 360 PWID.

Table 0-1: An Overview of Number of Clusters Selected in Study Districts

Districts	Total no. of clusters	No. of clusters selected
Jhapa	27	12
Morang	24	10
Sunsari	17	8

2.6 Sample Size

The same size of the sample used for previous rounds of IBBS surveys was also used in this round as well. Initially, the sample size was determined by using a basic statistical formula that estimated a sample size of 360 PWID (Annex 2).

2.7 Recruitment

Using the mapping information on locations and the estimated number of PWID in those locations, first stage clusters were defined, and 30 such clusters were selected using PPS method. The field teams, along with community motivators, visited selected clusters to prepare a list of PWID who met the criteria of the study. From the list created separately, 12 PWID were selected by systematic random sampling method from each selected cluster. Then the selected PWID were invited from each cluster to participate in the study. In such situations, community mobilizers and peer educators of ongoing HIV/AIDS programs, and social workers approached the selected PWID and invited them to participate in the study. At least three attempts were made to contact and include the potential participants. If this was not successful within three attempts, the person was replaced by another PWID selected randomly from the same cluster.

2.8 Data collection tools and techniques

Both biological and behavioral data was collected, including handling of biological data for external quality assurance. The survey used a structured questionnaire to assess background characteristics, injecting drug practices, sexual risk behaviors, use of condoms, knowledge and awareness of HIV/AIDS, HCV/HBsAg, STIs, exposure to HIV/AIDS programs, stigma and discrimination. The questionnaire was developed with reference to the existing questionnaire used in the previous round (VI) of IBBS survey among PWID in the same districts. Modifications were made to the questionnaire based on the pretest. Data collection tools were developed in Nepali, and the interviews were conducted in the Nepali language.

2.9 Study Personnel

The study team comprised of a team leader, a research officer, a statistician, field researchers, lab technicians, STI clinician, counselors, community motivators and support staff.

2.10 Training of Field Team and Pretesting

The field team was provided with 6 days of training by Intrepid Nepal. The training was facilitated by the experts from NCASC, Save the Children, FHI 360, and Joint United Nations Programme on HIV/AIDS (UNAIDS). The training covered an overview of IBBS, HIV Epidemic and Surveillance System in Nepal, survey design and approaches, sampling approaches, behavioral interviews, interview process, administering informed consent/assent, data collection tools, and role(s) and responsibilities of the team members. The training was followed by mock interview exercises in pairs and large group reflection that involved a discussion of mock exercises. Additionally, experts from PWID networks and organizations also shared their experiences on working with PWID.

With the help of Recovering Nepal (RN), implementing agencies (through their peer educator's/outreach educators), contacted PWID and invited them for the pretest with the inclusion of the study tools. The pretest was carried out Kalanki DIC of Sathi Samuha and consent was taken from all the study participants. A total of 4PWID were interviewed during the pretesting. The tools were revised based on the pretest. Information collected during the pretest was not included in the main analysis.

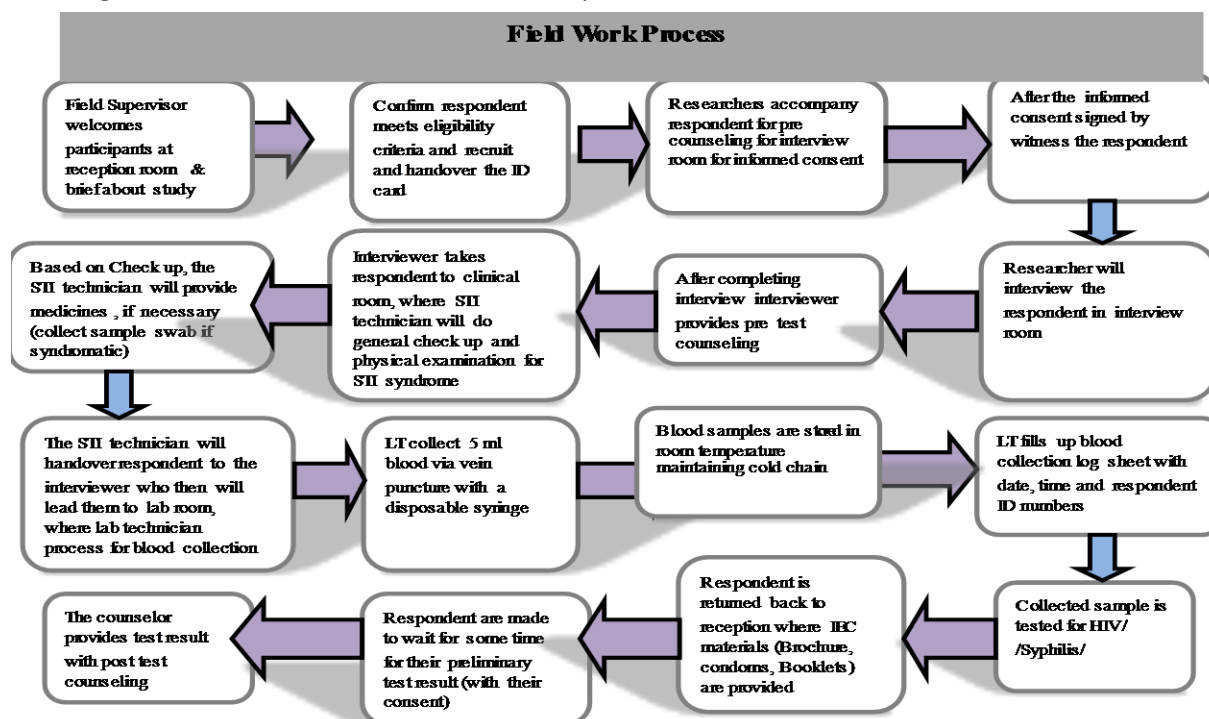
2.11 Fieldwork

The actual fieldwork of the study started on 16th March, 2016. Before the fieldwork, a stakeholder meeting was conducted among representatives from government organizations (GOs) and I/NGOs working with PWID. During the meeting, participants shared their experiences and knowledge about different types of PWID, and provided further support to the study. After the consultation meeting, the study team contacted the potential CMs and prepared them with required information regarding the target population for the study. The study team, with the help of CMs, listed the required number of PWID in the selected clusters. Four survey sites were selected for the study from Jhapa (Birtamod and Damak), Morang (Biratnagar) and Sunsari (Dharan). The clinic site was centrally located specifically for the convenience of meeting and bringing the PWID to the individual study sites. The field office had separate rooms for each activity such as welcome and registration, interviews, general physical and STI examinations, drawing blood and laboratory testing of blood, and pretest and posttest counseling. Before the interview, PWID were informally asked a few questions in order to ensure that they met the eligibility criteria set for the study. Injecting marks were also observed in order to screen for injecting behavior (i.e. skin lesions, abscesses, or puncture wounds).

Strict confidentiality was maintained throughout the study. All interviews were conducted by researchers in a private room. No names were mentioned in the tools or notes. Instead, participants were provided a unique ID number written on a card. The same number was marked on the questionnaire, on the medical record, and blood specimen of each respondent. This card was also used for the distribution of the test results. Only those participants who showed their ID card were

provided the HIV, HCV, HBsAg and syphilis test results along with posttest counseling. The entire work of fieldwork was completed on 12th April, 2017.

Figure 2: Fieldwork Process for IBBS Surveys



2.12 Refusal

All PWID participated voluntarily in the survey and none of the PWID approached by the survey team refused to participate in the survey.

2.13 Clinical and Laboratory Procedure

PWID were checked for any clinical symptoms of STIs by a certified health assistant who also filled out a checklist of health information provided by each participant. The clinical examination included a simple health checkup (measuring blood pressure, body temperature, weight, and pulse) and a symptomatic examination for the presence of any STIs followed by any necessary syndromic treatment (NCASC, National guidelines on Case Management of sexually transmitted infections, 2014). Laboratory service entailed onsite rapid screening of HIV1/2, HVB, HCV and syphilis followed by a confirmation test.

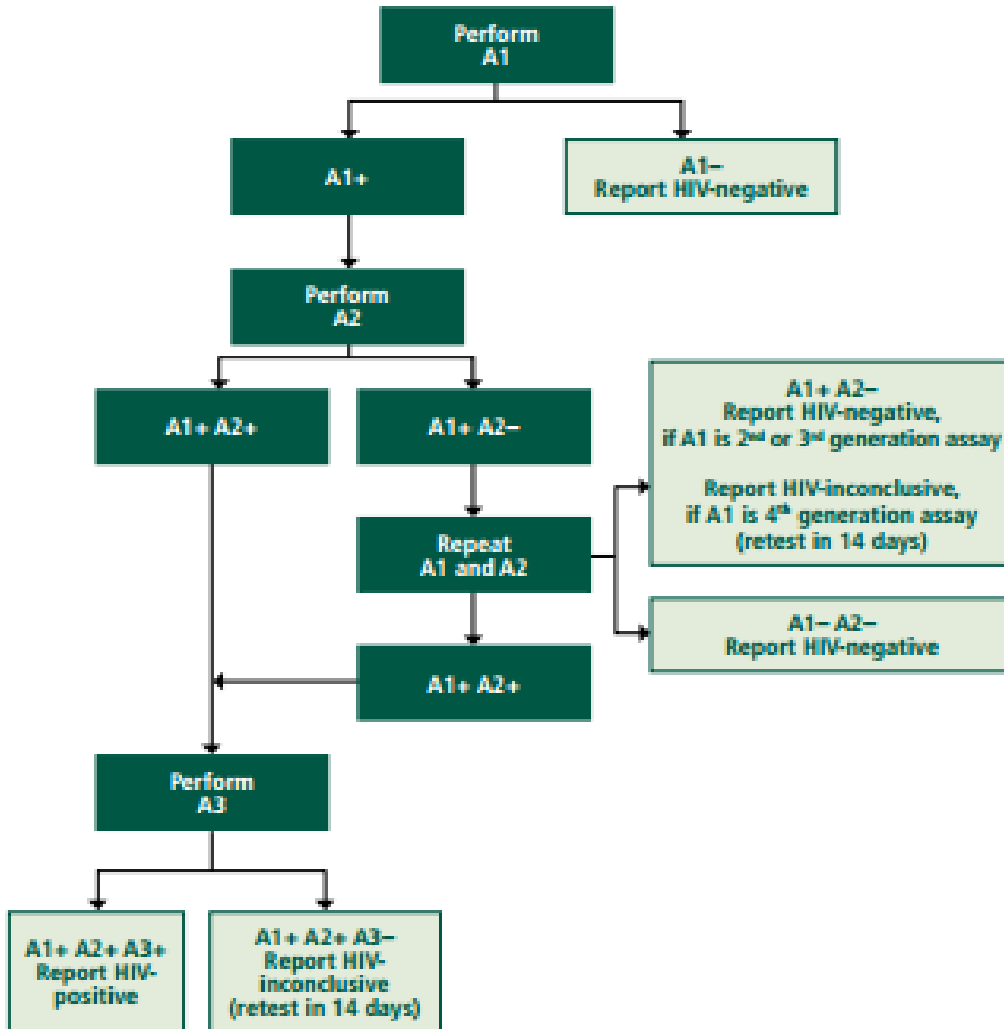
Approximately 5 ml of whole blood was drawn from each of the PWID using a disposable syringe. The blood sample was centrifuged to separate the blood cells from the serum. Each sample was labeled with the unique ID number correlating to an individual PWID. Following collection, a lab technician used the serum to perform a rapid HIV, HBsAg, HCV test and RPR test. Universal precautions and safe waste management practices were followed properly. For external quality assurance of tests, all

positive and 10 percent of negative samples were sent to the National Public Health Laboratory (NPHL) in Kathmandu for HIV and Syphilis.

HIV1/ 2

The HIV screenings of serum samples were performed using rapid test kits following the national HIV testing algorithm. Determine HIV 1/2 (Abbot, Japan), UniGold HIV 1/2 (Trinity Biotech, Ireland), and Stat Pak HIV 1/2 (Chembio diagnostics), as per the national Voluntary Counseling Testing (VCT) guidelines developed by NCASC in 2007, were followed. All the kits were based on the immune chromatography principle for detecting antibodies against HIV in serum or blood. Serum that tested reactive with the initial kit was confirmed with e second kit (A2) and Third Kits (A3). Samples that were found reactive on all three (A1, A2 and A3) tests were considered HIV positive. Samples that were non-reactive on the first test (A1) were considered HIV negative. Any sample that was reactive on the first (A1), second (A2) test and nonreactive on the third test (A3) then repeated all three test(A1, A2, and A3)with same individual sample and if retested were same then sample was considered HIV inconclusive. In that condition sample was suggested to repeat the test after 14 days. The internal quality of the assay was assured by the inbuilt control of each kit and external quality was assured by sending all positive cases and 10% of negative cases to reference lab (NPHL).

HIV Rapid Test Algorithm



Reference Note	
A1 (First test):	→ Determine HIV ½
A2 (Second test):	→ UniGold HIV
A3(Third test):	→ Stat Pak
"+"	→ Reactive
"-"	→ Nonreactive

Figure 3: HIV Testing Algorithm

Syphilis

A syphilis diagnosis was conducted following the National Guideline on Case Management of Sexually Transmitted Disease (NCASC, 2009). The serum was tested for nonspecific and specific treponemal agents. A non treponemal test, Rapid Plasma Reagin (RPR) [WAMPOLE Impact RPR card test, Alere], was used for both qualitative screening and semiquantitative titration. All RPR reactive serum was confirmed using the specific Treponema Pallidum Particle Agglutination (TPPA) test (Fujirebio Inc.). Serum samples that tested RPR positive with titer value above or equal to 1:8 were reported as active syphilis; titration less than 1:8 were reported as cases with history of syphilis. The quality of reagents and test cards of the RPR test kits were assessed on the site daily using a set of strong and moderate positive and negative controls. As part of external quality assurance, internal controls (positive and negative) were used to ensure the kits were working accurately and that all reactive/positive samples and 10% of nonreactive/negative samples were sent to NPHL for retesting.

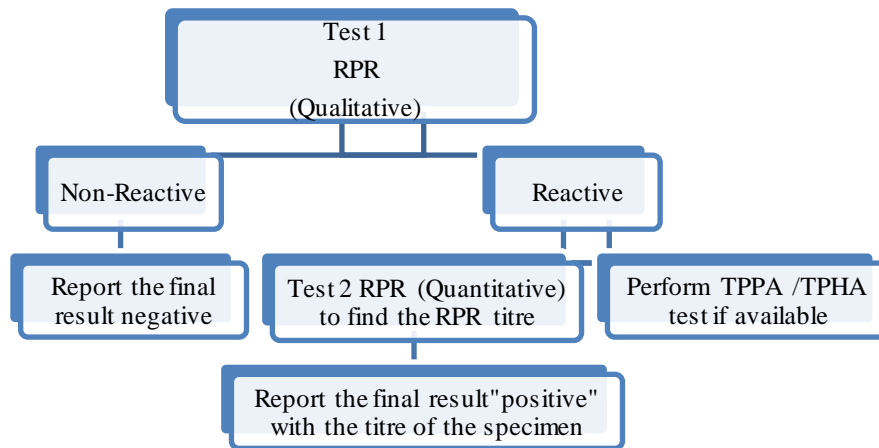


Figure 4: Syphilis Testing Algorithm

Syphilis RPR and TPPA test:

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

- RPR positive with more than or equal to 1:8 titre value and positive TPPA test confirms active Syphilis cases.
- RPR is 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 negative syphilis cases. (This may be due to unspecific syphilis RPR positive scenarios.)

Hepatitis B and C

The HBsAg and HCV screenings of serum samples were performed using rapid test kits.

HBsAg

The Rapid Signal™ organics HBsAg serum/plasma Dipstrip is a rapid chromatographic immunoassay for the qualitative detection of Hepatitis B Surface Antigen in serum or plasma

HCV

The rapid signal™ HCV Serum/Plasma Dipstrip is a rapid chromatographic immunoassay for the qualitative detection of antibody to Hepatitis C virus in serum or plasma. The internal quality of the assay was assured by the inbuilt control of each kit, and external quality was assured by sending all positive cases and 10% of negative cases to reference lab (NPHL)

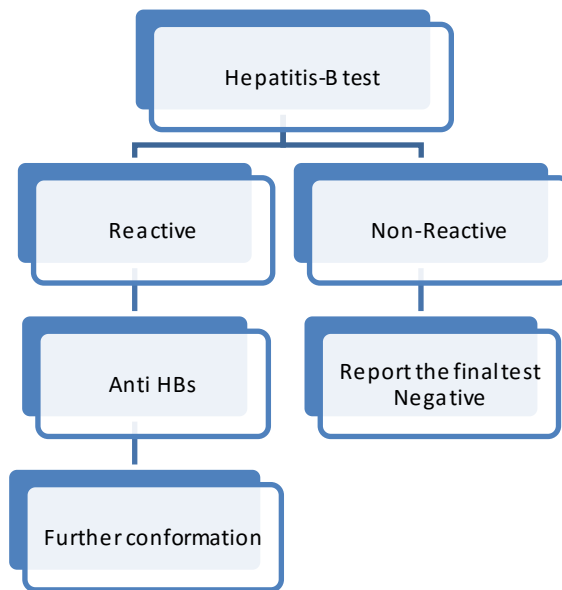


Figure 5: Hepatitis B (HBsAg) Algorithm

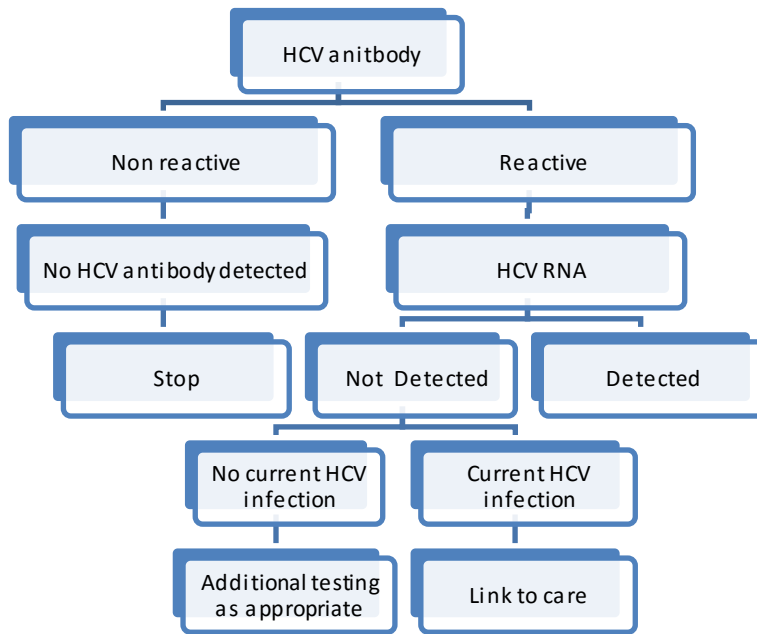


Figure 6: Hepatitis C (HCV) Algorithm

.2.14 Precautions, Disposal Mechanism and Post Exposure Management

Universal precautions and post exposure management were followed as per the recommendations of the Center for Disease Control (CDC, USA) and Nepal’s national guidelines. In order to minimize the possible spread of infection to clinical personnel and the local community, a strict disposal procedure was implemented. 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, broken glassware, and 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 flush toilet.

2.15 Quality Control of Laboratory Tests and External Quality Assurance Scheme

Quality control was strictly maintained throughout the process of specimen collection, as well as during the handling and testing stages. All the tests were performed using internal controls. Built in controls for the Rapid Diagnostic Test (RDT) and known external controls (positive and negative) for RPR and TPPA were used to ensure the validity of the tests. These controls were recorded with all of the laboratory data. For external quality control assurance, all positive, and a 10 percent sample of the negative serum collected were submitted to the NPHL to test for HIV, HBsAg, HCV and Syphilis. Aliquots of selected serum specimens were prepared in the field and sent to NPHL within a week maintaining cold chain system.

2.16 Fieldwork Supervision and Monitoring

The progress of the fieldwork was closely monitored throughout the survey period. The study team visited survey sites on an ongoing basis to monitor, supervise, and assist the field staff. A tracking sheet was developed to document the number of interviews conducted per day at each site.

Similarly, quality of the collected data was maintained throughout the study period. The team leader and research officer were both involved in monitoring controlling quality from the initial stage of the fieldwork. They reviewed forms to ensure that: 1) the correct clusters had been surveyed; 2) the correct number of PWID had been interviewed; and 3) the correct administration of the tablets for data collection had been carried out. They also checked the completed forms randomly, provided feedback, and made random revisits to ensure data quality. External monitors from NCASC, Save the Children and IBBS consultant also monitored the fieldwork.

2.17 Data management

Tablet based data collection forms were used in survey. The tablet based data collection form was developed by Pathways. The electronic data was extracted into MS Excel for verification and transferred into Statistical Package for the Social Sciences (SPSS). A number of quality check mechanisms including range checks, logical checks, and skip instructions were developed to detect the errors during the data entry stage.

To ensure confidentiality, each PWID was given a unique identity number. The numbers were coded in each questionnaire. The numbers, however, did not correspond to the names, contact numbers or addresses of the participants of the study. All entered data was kept secure in encrypted, password protected computers at the Intrepid Nepal to ensure anonymity of the participants.

2.18 Data analysis

Data was analyzed using descriptive statistics and bivariate analysis. Data was analyzed using SPSS for statistical analysis. Descriptive analysis of background characteristics, drug injecting behaviors, sexual behavior and sexual intercourse history, HIV risk related behaviors and knowledge of HIV/STIs, use and availability of condoms, knowledge of HIV and AIDS awareness programs were explored.

2.19 Ethical Considerations

Nepal Health Research Council (NHRC) approved the protocol of the study. The study was conducted in compliance with all human rights and ethical standards required by health researchers conducting studies in human subjects on sensitive issues, such as HIV and AIDS.

Informed consent was obtained from PWID prior to the interview. There may be a risk of identifying the PWID through their signatures if written consent was used. The informed consent was taken in the presence of a witness (community motivators or another member of the study team) who then signed the consent form. The procedure of the study was designed to protect privacy of the participants' allowing for anonymous and voluntary participation. Names and personal identifiers were not used during the collection of the required data prior to the interview, the purpose and benefit of the study was explained to each participant. They were provided with information about

the risks, confidentiality, and compensation. The participants were given the opportunity to ask questions about the study and to decide whether they would like to participate in the study. During the consent process, the participants were told that they were free to refuse or decline to participate at any stage during the study. Although the risk of participating in this study was minimal, there were some questions that could make the study subjects uncomfortable. They were clearly informed that in such a situation they were free to decline answering such questions and could also withdraw from the study at any time. Best efforts (confidential, free to withdraw from study any time) were made to minimize risks associated to study participants. During the analysis and presentation of the study findings, the names or addresses of the PWID were not mentioned.

2.20 Post Test Counseling and Distribution of Test Result

All PWID who were tested obtained their individual test results. All of the, who wanted their test results and showed their ID card, were given access to their individual HIV, HBsAg, HCV and syphilis test results along with posttest counseling. Posttest counseling and individual report dissemination was conducted for the PWID on the same day of the interview. The counseling session was provided by trained counselors and focused on high-risk behaviors and other aspects related to STIs and HIV. Some participants were also referred to other health facilities for further services.

2.21 Limitations of the survey

- This survey was conducted in three districts in Nepal. The analysis and results presented in this report are, therefore, confined to these districts, and may not be generalized to other districts or any other parts of the country.
- There may be a possibility of biased response. Study participants are expected to provide honest responses to the survey questions asked; however, in some circumstances this assumption may be breached due to factors such as social desirability or recall bias.
- There may be possibilities that same PWIDs can participate in multiple rounds of surveillance survey because a survey conducted in the same area among the same group over time

CHAPTER III: Findings

3.1 HIV, Syphilis, HCV and HBsAg Prevalence

The results comprised of biological and behavioral components. The biological components include prevalence of HIV, Syphilis, HCV, and HBsAg. The behavioral component consists of background characteristics, drug injecting behaviors, sexual behaviors, condom used with different partners, knowledge of HIV, exposure to HIV programs, stigma and discrimination among PWID.

The prevalence of HIV, HCV, HBsAg, Syphilis and different co-infections among the PWID was assessed in this survey. The prevalence of HIV-positive among the PWID in Eastern region of Nepal was reported as 3.3 percent and the prevalence of HCV-reactive and HBsAg-reactive prevalence as 38.1 percent and 0.8 percent respectively. Similarly, the prevalence of active syphilis among the PWID was revealed as 1.9 percent, with the equal percent i.e. 1.9 percent reporting previous history of syphilis. In addition, 2.5 percent of the PWID had co-infection of HIV and HCV, 0.6 percent had co-infection of HIV and HBsAg, 0.6 percent had co-infection of HCV and HBsAg and 0.3 percent had co-infection of HIV, HCV and HBsAg respectively.

Table 1. Biological Components

	Eastern	
	N=360	%
HIV – Positive	12	3.3
HCV – Reactive	137	38.1
HBsAg – Reactive	3	0.8
Active Syphilis	7	1.9
History Syphilis	7	1.9
Co-infection of HIV and HCV	9	2.5
Co-infection of HIV and HBsAg	2	0.6
Co-infection of HCV and HBsAg	2	0.6
Co-infection of HIV, HCV and HBsAg	1	0.3

3.2 Demographic Characteristics

The study explored the socio-demographic characteristics of PWID in the districts of Eastern regions. Most of the PWID belonged to the age group 20-24 years (35.6 percent) and 25-29 years (30.3 percent) with the mean age and standard deviation of 26.99 and 6.08 years respectively. About half of the PWID in this study were never married (51.4 percent) while a slightly less than half of the PWID were married (44.4 percent). The mean age at first marriage was 22.1 years with standard deviation of 4.25 years, with most marriages happening at the age group of 20-24 years (44.6 percent). Also, a larger number of PWID (66.1 percent) were identified to be living with their female sexual partner followed by another 30.2 percent who lived with their wives. Among the married PWID, most of them (72.5 percent) were found to be living with their wife while 26.3 percent were

found to be living with other sexual partner. Around 1.3 percent of the married PWID were found to be living without sexual partner/alone.

Similarly, most of the PWID (63.9 percent) had secondary level education and 15.6 percent were of primary education. About 6.4 percent of the PWID were also found to be illiterate. Likewise, while assessing the ethnicity of the PWID, the study explored that most of them (49.2 percent) belonged to disadvantaged Janajatis, followed by 22.8 percent belonging to upper caste groups. Around 2.2 percent of the PWID belonged to minority groups (Religious minorities). Furthermore, 79.4 percent of the PWID were found to be living in the current district from birth. At the same time, 7.2 percent of the PWID had lived in the current district for less than or equals to five years.

Table 2: Demographic Characteristics

	Eastern	
	N =360	%
Age		
16-19 Years	21	5.8
20-24 Years	128	35.6
25-29 Years	109	30.3
30-34 Years	59	16.4
35 Years and above	43	11.9
Mean ± Std. Dev.	26.99 ± 6.08	
Median (Range)	26 (17 – 49)	
Marital Status		
Never married	185	51.4
Married	160	44.4
Divorce/Separated	15	4.2
Education		
Illiterate	23	6.4
Primary	56	15.6
Secondary	230	63.9
SLC and above	43	11.9
Literate, no schooling	8	2.2
Ethnicity		
Dalit	38	10.6
Disadvantage Janajatis	177	49.2
Disadvantage non-Dalit Terai cast groups	24	6.7
Religious Minorities	8	2.2
Relatively advantaged Janajatis	31	8.6

	Eastern	
	N =360	%
Upper caste groups	82	22.8
Duration of stay in this currently living district		
Since birth	286	79.4
<= 5 years	26	7.2
More than 5 years	48	13.3
PWID living with		
Living with wife	117	32.5
Living with female sexual partner	238	66.1
Family/Relatives	4	1.1
No response	1	0.3
Age at first Marriage (n=175)		
<=19 Years	51	29.1
20-24 Years	78	44.6
25 Years and above	46	26.3
Mean ± Std. Dev.	22.10 ± 4.25	
Median (Range)	21 (14 – 37)	
Married PWID Living With (n=160)		
Wife	116	72.5
With Other Sexual Partner	42	26.3
Without Sexual Partner/Alone	2	1.3

3.3 Sexual Behaviour

Sexual history and HIV are very closely interconnected since sexual transmission is the major routes of HIV transmission. Most of the PWID (94.2 percent) had sexual intercourse in their life time. Most of them revealed their age at first sexual intercourse as before the age of 20 years. The study also found that about 72.9 percent of them had sexual intercourse over the past 12 months. However, the number of female sexual partners over the course of 12 months revealed great differences with the number ranging from one partner to seven or more. Nearly half of the PWID (49.8 percent) were found to have had sexual intercourse with a single partner, followed by PWID who had 2-3 partners (27.5 percent) for the purpose. Besides that, a minority of PWID revealed having sexual intercourse with four or more partners in the past year, which points to the possibility of greater risk as well as burden of HIV and other STDs.

Table 3: Sexual History

	Eastern	
	N	%

	Eastern	
	N	%
Ever had sexual intercourse		
Yes	339	94.2
No	21	5.8
Total	360	100.0
Age at first sexual intercourse		
Below 20 Years	281	82.9
20 Years and above	58	17.1
Total	339	100.0
Sexual intercourse in the past 12 months		
Yes	247	72.9
No	92	27.1
Total	339	100.0
Female sexual partners in the past 12 months		
1 partner	123	49.8
2–3 partners	68	27.5
4–6 partners	37	15.0
Seven and more partners	19	7.7
Total	247	100.0

Sexual behavior is an important predictor of HIV/AIDS transmission. The sexual behavior of PWID of the Eastern region was also assessed. The results showed that around 72.9 percent of the PWID had sex with their regular sex partner in the last 12 months. Among them, 31.6 percent of the PWID used condom with their regular partner in the last sex.

Table 4: Sexual behaviour with regular female sex partner

	Eastern	
	N	%
Sex with Regular Partner in the last 12 months		
Yes	247	72.9
No	92	27.1
Total	339	100.0
Use condom in the last sex with regular partner		
Yes	78	31.6
No	169	68.4
Total	247	100.0

While assessing the sexual behavior with female sex workers, greater than three quarters of the PWID(85.3 percent) reported having no sexual encounter with female sex workers in the last 12 months while the remaining (14.7 percent) cited having sexual intercourse with them. Among the

PWID who had sexual intercourse with FSWs in the last twelve months, about 60 percent of them revealed having no such encounters in the past one month, with 22.0 percent being involved in multiple sexual intercourse and 18 percent being involved in single sexual intercourse. Furthermore, condom use by PWID having sex with FSWs was found to be high at 72.0 percent. However, there were still 28 percent of PWID who reported not using condoms during the sexual intercourse with FSWs. Likewise, slightly more than half of the PWID (58.0 percent) highlighted their habit of using condom regularly during their every sexual intercourse with FSWs, whereas around 4 percent of the PWID never used condom during the sexual intercourse with FSWs.

Table 5: Sexual behaviour with FSWs

	Eastern	
	N=339	%
Sexual intercourse with FSWs in last 12 months		
Yes	50	14.7
No	289	85.3
Total	339	100.0
Sex with FSWs in the last one month		
None	30	60.0
Single	9	18.0
Multiple	11	22.0
Total	50	100.0
Use of condom in the last sex with FSWs		
Yes	36	72.0
No	14	28.0
Total	50	100.0
Used a condom with FSWs in the past year		
Every times	29	58.0
Almost every-times	11	22.0
Sometimes	8	16.0
Never used	2	4.0
Total	50	100.0

A series of questions were asked to PWID regarding their sexual behavior with non-regular sex partner for assessing the risky sexual behaviors that they exhibit. It was found that 72.3 percent of them had no sexual encounters with female non-regular sex partner over the last 12 months while the remaining 27.7 percent responded positively about such sexual encounters. Likewise, it was reported that out of those PWID who had such sexual encounters, only 54.3 percent had used condom and the remaining 45.7 percent lacked condom use in such encounters. Furthermore, the PWID who reported using the condom every time during such sexual encounters were 31.9 percent, followed by 28.7 percent who used condom sometimes only.

Table 6: Sexual behaviour with non-regular female sex partner

	Eastern	
	N	%
Sexual intercourse with a female non-regular sex partner during last 12 months		
Yes	94	27.7
No	245	72.3
Total	339	100.0
Condom use in the last sex with non-regular female sex partner		
Yes	51	54.3
No	43	45.7
Total	94	100.0
Used a condom with a female non-regular partner in the past year		
Every times	30	31.9
Almost every-times	25	26.6
Sometimes	27	28.7
Never used	12	12.8
Total	94	100.0

When the PWID were asked about their sexual behavior with male sex partner, a large majority (99.4 percent) reported having no anal sex with male partners in the past 12 months. Only 0.6 percent of them answered positively about such sexual encounters with male partner. Out of those who reacted positively, exactly half of them had used condom during such encounters while the rest hadn't used condom. Similarly, the consistency in condom use was observed every time in half of the PWID while the exact half reported using condom sometimes only.

Table 7: Sexual behaviour with male sex partner

	Eastern	
	N	%
Anal sex with a male partner in the past one year		
Yes	2	0.6
No	337	99.4
Total	339	100.0
Anal sex with him did you use condom		
Yes	1	50.0
No	1	50.0
Total	2	100.0
Used a condom during anal sex with a male partner is the past year		
Every times	1	50.0
Sometimes	1	50.0
Total	2	100.0

When the PWID were asked about their last sexual behavior with different sex partner in the past one year, more than half of the PWID reported regular female partners as their most recent sex partner (54.9 percent), followed by no sexual intercourse in the past year (27.1 percent) and female sex worker (5.6 percent) and other female friend (12.4 percent) respectively. Along with that, most of the PWID (68.4 percent) revealed no use of condom in the last sexual intercourse indicating the higher risk of transmission of HIV/AIDS and other STIs in this group of population.

Table 8: Last Sexual behaviour with different sex partner in the past one year

	Eastern	
	N	%
Last sexual intercourse with		
FSWs	19	5.6
Regular female partner	186	54.9
Other female friend	42	12.4
No sex in the past year	92	27.1
Total	339	100.0
Use condom in the last sexual intercourse		
Yes	78	31.6
No	169	68.4
Total	247	100.0

3.4 Drug Injecting Practices

PWID were asked about their Injecting history for assessing the behavioral risk factors for transmission. The mean and standard deviation of duration (in months) of injecting drugs by PWID was 67.82 and 55.26 months. Around 40.8 percent of them reported injecting drugs from over 61 months, followed by 30.8 percent for 25-60 months and 21.4 percent for 12-24 months. The mean age and standard deviation at first injection was 21.44 ± 4.70 years. Most of the PWID (72.2 percent) were reported to be involved in injecting practice at the age group of 16-24 years.

Table 9: Injecting History

	Eastern	
	N=360	%
Duration of drug injection		
Up to 11 months	27	7.5
12-24 months	77	21.4
25-60 months	111	30.8
61 + months	145	40.3
Mean ± Std. Dev.	67.82 ± 55.26	
Median (Range)	60 (4 – 360)	
Age at first injected		
Below 16 Years	19	5.3

16 - 24 Years	260	72.2
25 Years and above	81	22.5
Mean ± Std. Dev.	21.44 ± 4.70	
Median (Range)	20 (10 – 37)	

Injecting behaviors are one of the major factors that put the PWID in the higher risk of HIV infection. Unsafe injecting practices are known to be one of major routes of HIV transmission since a very long time. Thus, in order to assess the injecting behavior of PWID of Eastern regions, a series of questions were asked to them. Majority of the PWID (96.7 percent) had injected drug in the last month. Among those who injected drugs, about 19.3 percent reported using non-sterile syringe while the rest 80.7 percent avoided the use of non-sterile syringe. Furthermore, more than half of them (53.9 percent) reported injection of the drug in the last day only once, while the remaining 28.3 percent reported doing it twice and 17.8 percent reported doing it three or more times. Likewise, most (87.2 percent) of PWID identified their most recent use of needle/syringe as high risk behavior whereas the remaining 12.8 percent identified it as a low risk behavior. The PWID were also asked about the number of people who were present during the last injection and most of them (87.2 percent) reported doing it alone whereas 10 percent of them reported doing it with 1-2 persons and 2.8 percent reported doing it with 3-5 persons.

Table 10: Injecting behaviour in the past month and last injection

	Eastern	
	N=360	%
Inject drug in the last month		
Yes	348	96.7
No	12	3.3
Total	360	100.0
Injected used and non-sterile syringe in the last month		
Yes	67	19.3
No	281	80.7
Total	348	100.0
Frequency of drug injection in the last day		
Once	194	53.9
Twice	102	28.3
3 or more times	64	17.8
Total	360	100.0
Needle/syringe used; Most recent		
High risk behavior	314	87.2
Low risk behavior	46	12.8
Total	360	100.0
Number of person during last injection		
Alone	314	87.2

	Eastern	
	N=360	%
1-2 Persons	36	10.0
3-5 Persons	10	2.8
Total	360	100.0

PWID enrolled in this study were asked series of questions about their injecting behavior in the past one week. Most (97.6 percent) of the PWID highlighted sharing needle with their friend in the last one week. Similarly, most of the PWID (89.7 percent) responded negatively to giving away their needle in the last one week to someone else after injecting drugs whereas the remaining (10.3 percent) responded positively to the same question. At the same time, majority of the PWID underlined their non-use of pre-filled syringe (89.2 percent) and syringe after someone else had squirted drug into it from their used syringe (89.2 percent) respectively. The sharing of a cooker/vial/container, cotton/filter or rise water was also found to be absent from majority (94.4 percent) of the PWID.

Table 11: Injecting behaviour in the past one week

	Eastern	
	N=360	%
Last week shared needle with		
Sexual partner	4	9.8
Friend	40	97.6
Others	1	2.4
Total	41	100.0
Shared the needle to someone after injecting in last week		
Almost/every time/sometime	37	10.3
Never	323	89.7
Total	360	100.0
Ever injected with pre filled syringe		
Yes	38	10.6
No	321	89.2
Do not know	1	0.3
Total	360	100.0
Injected drugs using a syringe after someone had squirted drugs in to it from his/her used syringe		
Almost/every-times/sometimes	37	10.3
Never	321	89.2
Do not know	2	0.6
Total	360	100.0
Shared a cooker/ vial/container, cotton/filter, or rise water		
Almost/every-times/sometimes	18	5.0

	Eastern	
	N=360	%
Never	340	94.4
Do not know	1	0.3
No response	1	0.3
Total	360	100.0

3.5 Comprehensive knowledge of HIV/AIDS

The knowledge regarding ways to avoid HIV/AIDS is assessed through the ABCDEF terminology; [A] Abstinence from sexual contact, [B] Being faithful to one partner, [C] Condom use during each sexual contact, [D] A healthy-looking person can be infected with HIV, [E] A person cannot get the HIV virus from mosquito bite and [F] Sharing a meal with an HIV infected person do not transmit HIV. Analysis of data showed good knowledge among PWID in Eastern region of Nepal regarding certain ways of avoiding HIV/AIDS. Majority of the PWID demonstrated excellent knowledge regarding C and D of avoiding HIV/AIDS while a slightly lower number of PWID showed good knowledge regarding B and F portion. Likewise, knowledge about A and E aspects of avoiding HIV/AIDS was found to be the lowest. However, complete knowledge on the ABCDEF of avoiding HIV/AIDS among PWID in Eastern region of Nepal is only satisfactory as shown by the overall knowledge of ABC and BCDEF which stands at 60 and 49.4 percent respectively.

Table 12: Knowledge of major ways of avoiding HIV/AIDS

	Eastern	
	N=360	%
[A] Abstinence from sexual contact	239	66.4
[B] Being faithful to one partner	308	85.6
[C] Condom use during each sexual contact	346	96.1
[D] A healthy-looking person can be infected with HIV	331	91.9
[E] A person cannot get the HIV virus from mosquito bite	209	58.1
[F] Sharing a meal with an HIV infected person do not transmit HIV	313	86.9
Knowledge of all three ABC	216	60.0
Knowledge of all five BCDEF	178	49.4

3.6 Knowledge of Hepatitis C(HCV)

Hepatitis C virus is a very infectious and deadly form of virus that can easily spread when a person comes in contact with surfaces, equipments or objects that are contaminated with infected blood. The unsafe practices of PWID pose a greater risk of HIV and HCV transmission particularly in this group. Out of total PWID, 64.4 percent of them had heard about HCV while the remaining (35.6 percent) responded negatively about the same. At the same time, only 48.3 percent of PWID who had heard about HCV, reported HCV as sexually transmissible and preventable by regular use of condoms. Besides that, the transmission of HCV through sharing of needles and tattooing was also outlined by 90.1 percent and 68.1 percent of the PWID respectively. Likewise, 75.4 percent of the

PWID knew about the medical treatment for Hepatitis C and 26.7 percent were aware about the herbal treatment for Hepatitis C.

Table 13: Knowledge of HCV

	Eastern	
	N=360	%
Heard about Hepatitis C		
Yes	232	64.4
No	128	35.6
Total	360	100.0
Hepatitis C be transmitted through sex		
Yes	112	48.3
No	71	30.6
Do not know	49	21.1
Total	232	100.0
Condoms protect you against hepatitis C		
Yes	165	71.1
No	38	16.4
Do not know	29	12.5
Total	232	100.0
Hepatitis C only occur if you have HIV		
Yes	21	9.1
No	174	75.0
Do not know	37	15.9
Total	232	100.0
Hepatitis C be transmitted by sharing needles		
Yes	209	90.1
No	6	2.6
Do not know	17	7.3
Total	232	100.0
Hepatitis C be transmitted through tattooing		
Yes	158	68.1
No	47	20.3
Do not know	27	11.6
Total	232	100.0
Medical treatment for hepatitis C		
Yes	175	75.4
No	18	7.8
Do not know	39	16.8
Total	232	100.0

	Eastern	
	N=360	%
Herbal remedies cure hepatitis C		
Yes	62	26.7
No	70	30.2
Do not know	100	43.1
Total	232	100.0

3.7 Exposure to HIV awareness program

The exposure of PWID in the ongoing HIV/AIDS awareness programs is crucial in bringing changes in their behavioral aspects. The PWID enrolled in this study were asked a series of questions to analyze their participation on those activities. In the last 12 months, 13.6 percent PWID discussed/interacted with PE/OE/CM/CE. Along with that, 34.7 percent visited to outreach centers (DIC/IC/CC) and 1.9 percent reported about their visit to any STI clinics. Only 1.4 percent of them had visited any HTC centers.

Table 14: Program exposure in the past 12 months

	Eastern	
	N=360	%
Discussed with PE/OE/CM/CE	49	13.6
Visited to outreach center (DIC/IC/CC)	125	34.7
Visited any STI clinic	7	1.9
Visited any HTC	5	1.4

3.8 Knowledge about PMTCT

When asked about the knowledge of PMTCT, a huge gap was observed on this aspect. Out of total PWID, only 12.2 percent of them had heard about PMTCT for pregnant women and only 10.3 percent of them knew pregnant women could get PMTCT services.

Table 15: Knowledge of PMTCT

	Eastern	
	N=360	%
Ever heard about (PMTCT) for pregnant women	44	12.2
Pregnant women can get PMTCT services	37	10.3

3.9 Knowledge about ART and CHBC

The survey also focused on exploring the knowledge of PWID on ART and CHBC. One fourth of PWID(25.6 percent) had heard about ART services while an even lower percentage (15.3 percent) of PWID knew about the site from where the HIV positive individuals could get the ART services. In addition to that, only 13.3 percent PWID had heard about viral load testing service for HIV positive

individuals. Similarly, a lowly 9.2 percent of PWID were aware or had information regarding the site from where HIV positive individuals could get viral load testing services. Likewise, only 26.4 percent of them had heard of any CHBC services that are provided for the HIV positive people.

Table 16: Knowledge about ART and CHBC

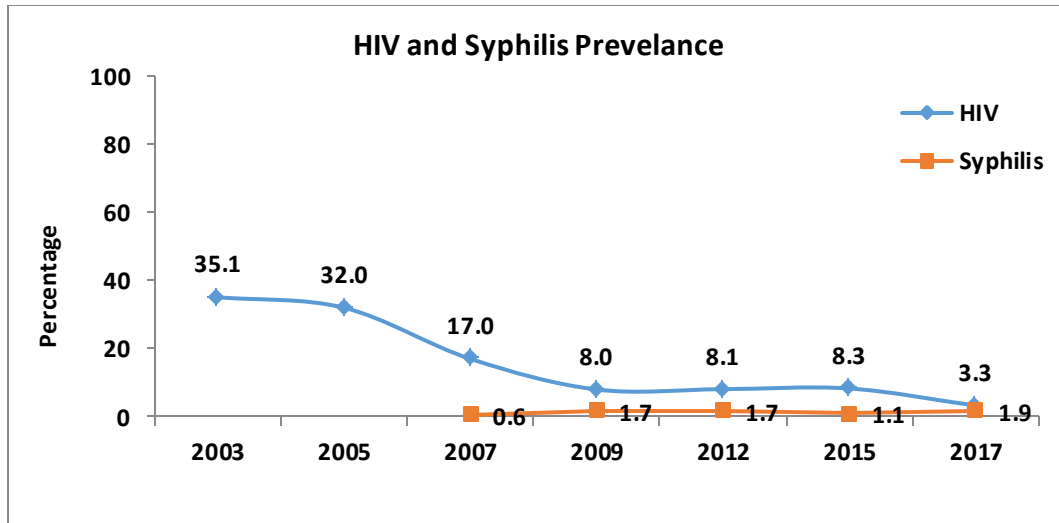
	Eastern	
	N=360	%
Heard about (ART) services for HIV positive individuals	92	25.6
From where HIV positive individuals can get ART services	55	15.3
Heard of viral load testing services for HIV positive individuals	48	13.3
HIV positive individuals can get viral load testing services	33	9.2
Heard of any (CHBC)services that are provided for HIV positive people	95	26.4

CHAPTER IV : Comparative Analysis of Key Indicators

4.1 HIV and Syphilis prevalence

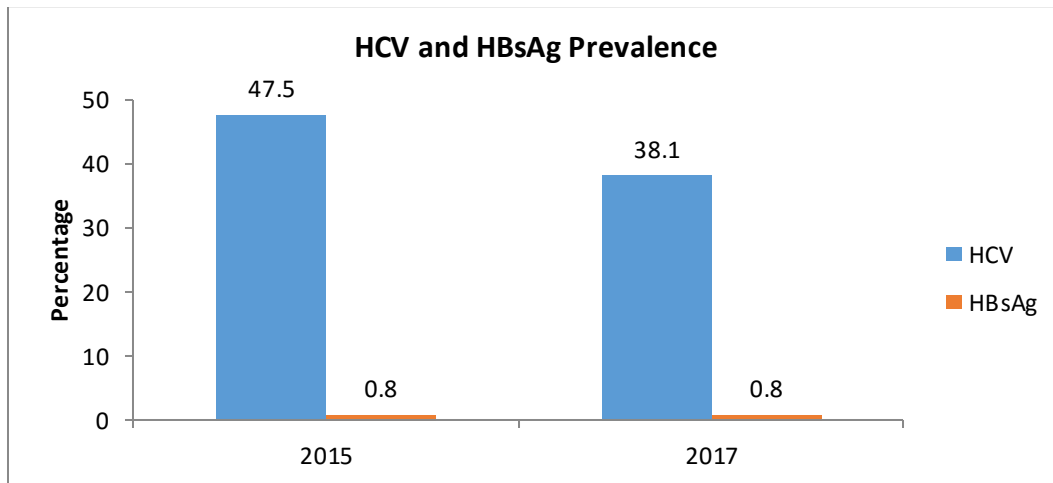
Figure analyzes the trend of prevalence of HIV over time. HIV prevalence among PWIDs has significantly decreased since the first round in 2002 to 2009 (p-value<0.05). However HIV prevalence had decreased from 8.3 percent in 2015 to 3.3 percent in 2017.

Likewise the figure also shows the trends of Syphilis prevalence among PWIDs from 2007 to 2017. The prevalence of active syphilis slightly increased from previous rounds of IBBS surveys(2007, 2009, 2012 and 2015). Syphilis prevalence was 1.1 percent in 2015 and decreased to 1.9 percent in 2017.



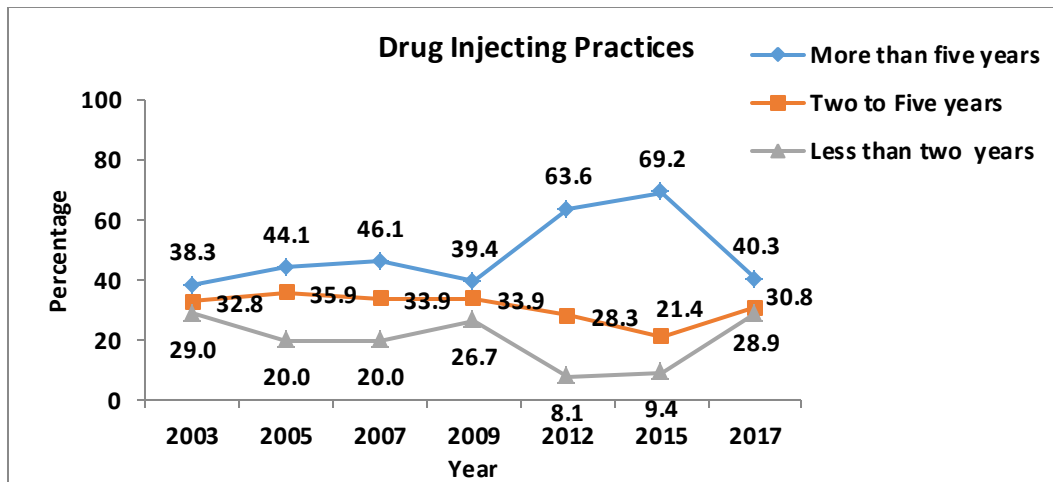
4.2 HCV and HBsAg Prevalence

In the figure below, it shows both HCV and HBsAg prevalence. HCV prevalence among PWID had decreased to 38.1 percent in 2017 from 47.5 percent in 2015. However HBsAg prevalence remain as it is of 2015(0.8%)



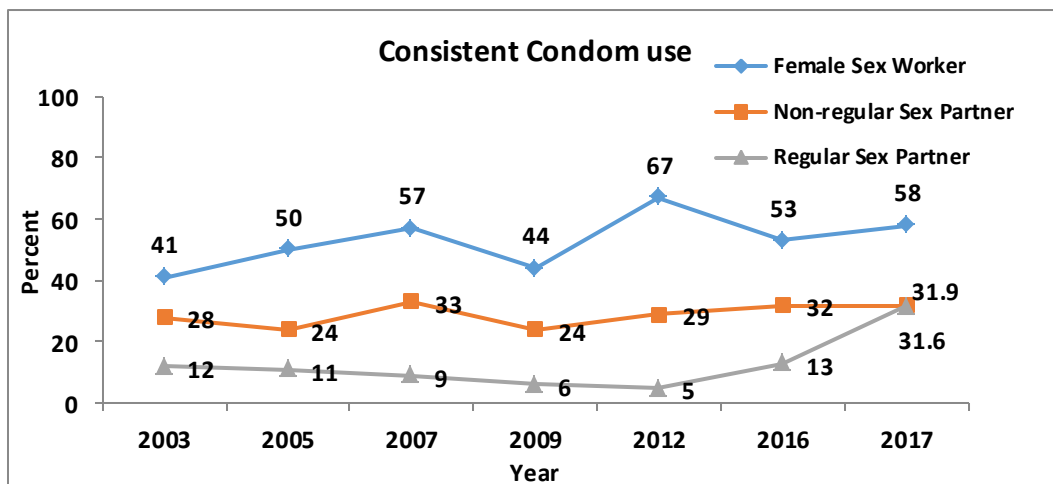
4.3 Drug injecting practices

Figure shows the drug injecting practices of PWIDs. Majority of PWIDs had been injecting drugs more than five years and the trend is increasing significantly from 38 percent in 2003 to 69 percent in 2015. In year 2017, it had decreased to 40.3 percent from previous round of survey. PWID injecting for two years to five years increased from previous two IBBS surveys, 28.3 in 2012, 21.4 percent in 2015 to 30.8 percent in 2017. Similarly PWID injecting less than two years had increased significantly from 9.4 percent in 2015 to 28.9 percent in 2017.



4.4 Consistent Condom use with different partners

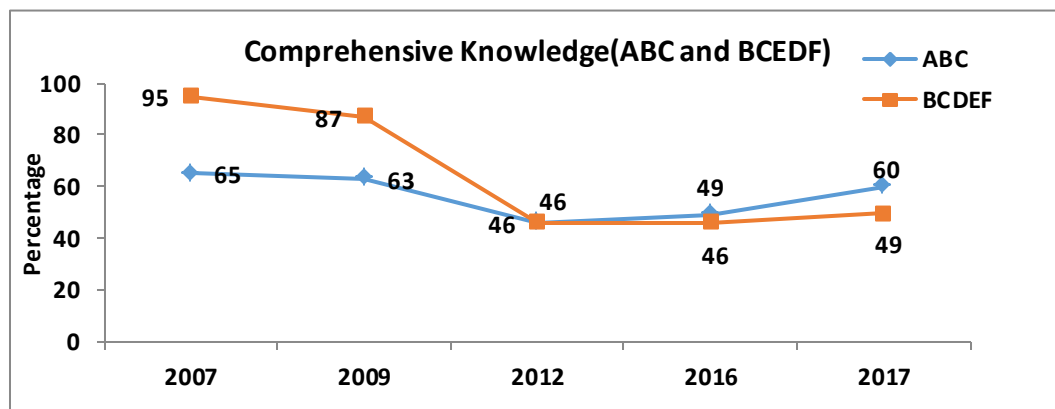
In the figure below, it shows the trend of consistent condom with different partners, regular female sex partners, non-regular female sex partners and female sex workers(FSW). Consistent condom use with regular female sex partners decreased from 12 percent in 2003 to 13 percent in 2015 but in 2017 it had increased to 31.6 percent. Similarly consistent condom use with non regular female partners decreased from 32 percent in 2015 to 31.9 percent in 2017. Consistent use of condom with FSWs had increased from 53 percent to 58 percent in 2017.



4.5 Comprehensive knowledge (ABC and BCDEF)

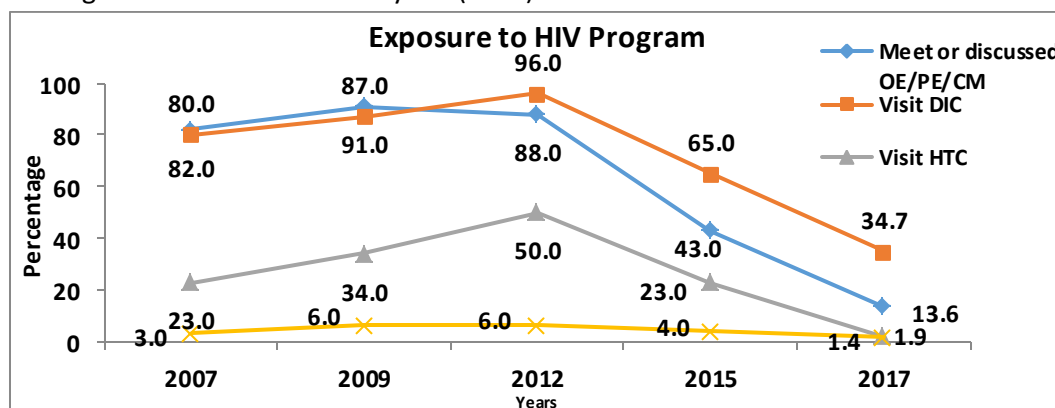
Comprehensive knowledge is measured by proper knowledge on abstinence (A), being faithful (B) and consistent and correct condom use for infection prevention (C) and on three misconceptions related to food sharing (D), mosquito bite (E) and infection on healthy looking person (F). Figure below reveals the trend of Comprehensive Knowledge on HIV and AIDs among PWIDs. The percent of PWIDs who were aware of all three ABC

increased from 46 percent in 2016 to 49.4 percent in 2017. Similarly, comprehensive knowledge about HIV and AIDS (BCDEF) was also increased from 49 percent in 2016 to 60 percent in 2017.



4.6 Program Exposure

Above figure shows the trend of exposure to HIV programs among PWID. It was found that PWID who interacted with an outreach educator (OE) or peer educator (PE) or community motivators (CM) significantly decreased from 82 percent in 2007 to 13.6 percent in 2017. PWID visiting drop-in-centers (DICs) had decreased from 65 percent in 2015 to 34.7 percent in 2017. Moreover, PWID visiting HTC centers had decreased significantly to 1.9 percent in 2017 from previous rounds of survey (23 percent in 2007, 34 percent in 2009, 50 percent in 2012 and 23 percent in 2015). PWID visiting STI clinics remained very low(1.4%) in 2017.



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ANNEX

Questionnaire

Integrated Biological and Behavioral Surveillance Survey among People Who Inject Drugs (PWIDs)

Operational definition of PWIDs:

“Current male 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”

Interviewer Name: _____

Code Interviewer: _____

Date Interview: ____/____/2072

Checked by the supervisor: Signature: _____ Date: /____/2073

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 How long you have been injecting drugs?

Years Months

(NOTE: A FOR MENTIONED QUESTIONS ARE THE SCREENING QUESTIONS. 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 District: _____

003.2 VDC/Municipality: _____

1.0 BACKGROUND OF RESPONDENT

Q.N.	Question	Coding Categories	Skipto
101	Where are you living now? (Write current place of residence)	District: _____	
101.1	How long have you been living continuously at the same address? (Write 995 if less than one month)	Month..... <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Always(since birth).....0 Others(Specify).....96	
102	How old are you?	Age..... <input type="text"/> <input type="text"/>	
103	What is your educational status? (Circle '0' if illiterate, '19' for the literate without attending the school, and write exact number of the passed grade)	Illiterate..... 0 Literate.....19 <input type="text"/> <input type="text"/> Grade..... <input type="text"/> <input type="text"/> (write the completed grade)	→
104	What is your caste? (Specify Caste)	Caste _____ CodeNo..... <input type="text"/> <input type="text"/>	
105	What is your current marital status?	Never married.....1 Married2 Divorced/Permanently separated..3 Widow.....4	→ 106
105.1	How old were you when you first got married?	Age..... <input type="text"/> <input type="text"/> (write the completed years)	
106	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 Rented room.....5 Other(specify)96	

107	With whom you are living now?	Living with wife.....1 Living with female sexual partner.....2 Living without sexual partner.....3 Family.....4 Others(Specify).....96 No response.....99	
107.1	How many dependents are there in your family?	Number: <input type="text"/> <input type="text"/>	
108	During the past one-month how often have you had drinks containing alcohol? (Such as beer, local beer etc.)	Everyday1 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	Skipto
201	How long have you been using drugs? (Drug means medicine not used for treatment purpose rather used for Intoxication)	Year..... <input type="text"/> <input type="text"/> Months..... <input type="text"/> <input type="text"/>	
202	How old were you when you first injected drugs? (Include self-injection or injection by another)	Years..... <input type="text"/> <input type="text"/> (write the completed years)	
203	How long have you been injecting drugs? (Include self-injection or injection by	Years..... <input type="text"/> <input type="text"/> Months..... <input type="text"/> <input type="text"/>	
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)		

		Used in Last-Week				Injected in Last-Week			
		YES	NO	DK	NR	YES	NO	DK	NR
	1. Tidigestic/Noorphine/Nufine/Lupe gestic					1	2	98	99
	2. Brown Sugar/White Sugar	1	2	98	99	1	2	98	99
	3. Nitrosun/Nitrovate	1	2	98	99	1	2	98	99
	4. Ganja/Chares	1	2	98	99				
	5. Phensydl+Corex	1	2	98	99				
	6. Calmpose/Diazepam/Velium 10	1	2	98	99	1	2	98	99
	7. Codeine	1	2	98	99	1	2	98	99
	8. Phenergan/Stagon	1	2	98	99	1	2	98	99
	9. Cocaine/Cracks	1	2	98	99				
	10. Proxygin/Proxyvon	1	2	98	99	1	2	98	99
	11. Effidin	1	2	98	99	1	2	98	99
	12. Lysergic Acid Dithylamide (LSD)	1	2	98	99				
	13. Avil/Algic	1	2	98	99	1	2	98	99
	14. Amphetamine/Yava	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 → 204.1			
		No response.....99							
204.0.2	If yes, how many drugs has been used?	<input type="text"/> (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			

Q.N.	Questi	Coding Categories	Skipto
204.1.1	If yes, which drug?	From _____ drug To _____ drug	
204.1.2	What is the reason for switching?	To decrease Tidigestic.....1 Costly.....2 Difficult to find drugs.....3 Others.....96	
205	How many times did you inject drugs yesterday?	Times..... <input type="text"/> → Not injected.....0	207

206	Would you like to tell me why you did not inject yesterday?	Due to lack of Money.....1 Want to quit slowly.....2 Had taken Ganja.....3 Had taken Brown Sugar.....4 Had injected previous day.....5 Had taken alcohol.....6 Did not find Drugs.....7 Was under police custody.....8 Had taken Nitrosun.....9 Was Sick.....10 Had taken other drugs.....11 Was busy in household activity...12 Others (Specify).....96	
207	How many days ago did you inject?	Days ago..... <input type="text"/> <input type="text"/>	
208	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	
209	(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 → Noreponse.....99	210
209.1	In the past year, have you ever been imprisoned or detained for any reason?	Yes.....1 No.....2 → Noreponse.....99	210
209.2	In the past year, have you ever been imprisoned for drug-related reason?	Yes.....1 No.....2 → Noreponse.....99	210
209.3	In the past year, how many times have you been imprisoned for drug-related reason?	Times..... <input type="text"/> <input type="text"/>	

209.4	Have you ever injected drugs while in prison?	Yes..... 1 No..... 2 Noreponse..... 99	
210	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 Don't Know..... 98 No response..... 99	

3.0 NEEDLE SHARING BEHAVIORS

Q.N.	Question	Coding Categories	Skipto
301	Think about the times, you have injected drugs Yesterday/last day. How many times did you inject drugs on that day? (Fill the number from answer to Q.205 and verify by asking the respondent)	Times..... <input type="text"/> <input type="text"/>	
302	The last time you injected, how did you get that syringe/needle? (Public place means places other than the PWIDs 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 (writethenameofOrganization) 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	

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 syringe/needle?	No of person:..... <input type="text"/> <input type="text"/> Injected alone.....95	
-------	---	---	--

Q.N.	Question	Coding Categories	Skipto
307	In the past one-week, did you ever share needles and syring		
	Readout 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 drug seller	1 2 98 99	
	5. Unknown Person	1 2 98 99	
96. Other (Specify) _____	1 2		
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 time s.....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 know98 No response.....99	

Q.N.	Que	Coding Categories	Skipto
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-	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 riser/sewer?	Every time.....1 Almost every-time.....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	
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 1 Other shop.....2 Health worker.....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 of11 (write the name of Organization) Steal from legitimate source (hospital./pharmacy).....12 Buy on streets.....13 Other (Specify)96	
315.1	Are you satisfied from the new syringe?	Very satisfy.....1 Satisfy.....2 Average.....3 Unsatisfied.....4 Very unsatisfied.....5	
316	What do you usually do with your used needle/syringe?	Disposed1 Gave to friend.....2 Kept/carry safely for another use.....3 Hide in public places4 Threw anywhere (please specify).....5 Others (specify).....96 Don't know98	

Q.N.	Question	Coding Categories	Skipto
317	In the past one-year, did you ever inject drug in another city/district (or another country)?	Yes.....1 No.....2 Don't remember.....9 8 No response.....9 9	
318	Are you currently undertreatment (or receiving help) or have you ever received treatment (or help) because of your drug use?	Currently undertreatment.....1 Was in treatment but not now.....2 Have never received treatment.....3 No response.....99	320
319	How many months ago did you last receive treatment or help for your drug use?	Months..... <input type="text"/> <input type="text"/> Don't know.....98 No response.....99	
320	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	

4.0 SEXUAL HISTORY

Q.N.	Question	Coding Categories	Skipto
401	How old were you at your first sexual intercourse?	Years old <input type="text"/> <input type="text"/> <i>(Write completed years)</i> Never had sexual intercourse..... 0 Don't know.....98 No response.....99	601

Q.N.	Question	Coding Categories	Skipto
402	Have you had sexual intercourse in the last 12 months?	Yes.....1 No.....2 No response.....99	

403	In total, how many different female sexual partners have you had sex in the last 12 months?	Number..... <input type="text"/> <input type="text"/>	
403.1	How many were female "regular partners"? (Your wife or live-in sexual partners)	Number..... <input type="text"/> <input type="text"/> Don't know.....98 No response.....99	
403.2	How many were female "sex worker"?	Number..... <input type="text"/> <input type="text"/>	
403.3	How many were female "non-regular partners"? (Sexual partners, you are not married to)	Number..... <input type="text"/> <input type="text"/>	
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/oral sex in the last 12 months?	Number..... <input type="text"/> <input type="text"/> Don't know.....98 No response.....99	
404.3	The last time you had anal/oral 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 anal/oral sex with male sex partner in the past 12 months	Every Times.....1 Almost Every Times.....2 Sometimes.....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

403.1once again and correct the response)

Q.N.	Question	Coding Categories	Skipto
501.	Did you have sex with female regular partner (wife or live-in partner) during last 12 months?	Yes.....1 No.....2	→ 502
501.2	The last time you had sex with female regular partner did you or your partner use a condom?	Yes.....1 No.....2 Don't know.....98 No response.....99	→ 501.4 501.4

Q.N.	Question	Coding Categories	Skipto
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	
501.4	Did your female regular partner also inject drugs?	Yes.....1 No.....2 Don't know.....98 No response.....99	
501.5	Have you ever had an anal sex with your female regular partners?	Yes.....1 No.....2 Don't know.....98 No response.....99	
501.6	The last time you had an anal-sex with female regular partner did you or your partner use a condom?	Yes.....1 No.....2 Don't know.....98 No response.....99	502
501.7	How often have you used a condom in an anal-sex with female regular partners in the past 12 months?	Everytime1 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.)	Yes.....1 No.....2	→ 503
502.1	Think about the female sex worker that you have had sex in the past one-month. In total how many female sex workers you had sex in exchange for money or drugs?	Number <input type="text"/> Don't know.....98 No response.....99	
502.2	With how many sex workers you had sex in last month by paying them money or drugs?	No..... <input type="text"/> Don't know.....98 No response.....99	

Q.N.	Question	Coding Categories	Skipto
502.3	The last time you had sex with a female sex worker did you or 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 or your partner use a condom that time? (Do not read the possible answers, multiple answers 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 an 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 an anal sex with 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.....9 8 No response.....99	

Q.N.	Question	Coding Categories	Skipto
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.)	Yes.....1 No.....2	504
503.2	The last time you had sex with a female non-regular partner did you or your partner use a condom?	Yes.....1 No.....2	503.4
503.3	Why did not you or your partner use a condom that time? (Don't tread the possible answers, multiple answer possible)	Not available.....1 Too expensive.....2 Partner objected.....3 Don't like them.....4 Used other contraceptive.....5	
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 an 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 an 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 time.....1 Almost every time.....2 Sometimes.....3 Never used.....4 Don't know.....98 No response.....99	
504	Have you had an anal sex with a male partner in the past one year? (See the response in Q.404.1 and circle Q.)	Yes.....1 No.....2	→ 505

Q.N.	Question	Coding Categories	Skip to
504.2	The last time you had an 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 tread possible answer, multiple answers possible)	Not available.....1 Too expensive.....2 Partner objected.....3 Don't like.....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	

504.4	How often have you used a condom during anal sex with a male partner in the past year? (Check Qno. 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	

Q.N.	Question	Coding Categories	Skipto
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 & 602 and Probe if the response is contradictory)

601	Have you ever used a condom?	Yes.....1 No.....2	
-----	------------------------------	-----------------------	--

602	Do you know of any place or person from which you can obtain condom?	Yes.....1 No.....2 No response.....99	701
603	From which place or people, can you obtain condoms? (Multiple answers possible. Don't tread the list but probe)	Shop.....1 Pharmacy.....2 Clinic.....3 Hospital.....4 Family planning center.....5 Bar/Guesthouse/Hotel.....6 Healthworker.....7 Peer Educator/Outreach doctor.....8 Friend.....9 Pan Pasa.....10 Others (Specify).....96 No response.....99	
603.1	Did any organization give you condom in the last 12 months?	Yes, free of cost.....1 Yes, by taking money.....2 No.....3	
604	Do you usually carry condom with you?	Yes.....1 No.....2	

7.0 KNOWLEDGE AND TREATMENT OF STIs

Q.N.	Question	Coding Categories	Skipto
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 answers possible)	Genital discharge.....1 Burning pain on urination.....2 Genital ulcers/sore blisters.....3 Swelling 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.....9	705
704.1	Currently, do you have genital discharge/burning urination problem?	Yes.....1 No.....2 Don't know.....98 No response.....99	
705	Have you had genital ulcer/sore blisters 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 blisters?	Yes.....1 No.....2 Don't know.....98 No response.....99	
706	Last time you had genital discharge/burning urination or genital ulcer/sore blisters, 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

Q.N.	Question	Coding Categories	Skipto
801	Have you ever heard of HIV or the disease called AIDS? (Probe if the response is 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	

Q.N.	Question	Coding Categories	Skipto
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.....98 No response.....99	
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 injects drug protect himself/herself from HIV, the virus that causes AIDS, by switching to non-injecting drugs? (Oral or inhaled 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)	Took 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.....98	

813.2	Can a person get HIV by shaking hand with an infected person?	Yes.....1 No.....2 Don't know.....98	
813.3	Can blood transfusion from an infected person to the other transmit HIV?	Yes.....1 No.....2 Don't know.....98	
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	

Q.N.	Question	Coding Categories	Skip to
815	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 months.....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	Did you find out the result of your HIV test?	Yes.....1 No.....2 No response.....99	818.1 901
818.1	What was the result of your last test?	Positive.....1 Negative.....2 Uncertain.....3 Result not received.....4 Don't know.....98 No response.....99	901 819 901

818.2	Did you go to HTC for HIV care once you knew you were HIV positive?	Went.....1 Did not go.....2 Don't know.....98 No response.....99	
818.3	Why didn't you go to HTC for HIV care even after knowing you were HIV positive?	Felt I was healthy.....1 Others might know.....2 Had to pay.....3 Bad attitude of healthcare provider..4 Long waiting time/Could not manage with Clinic opening time.....5 Others (Specify).....96 Don't know.....98 No response.....99	→
819	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	

9.0 KNOWLEDGE OF HEPATITIS C

I am going to ask you to answer some questions about your general knowledge of Hepatitis C.

Q.N.	Questions	Response categories	Skip to
900	Have you heard about Hepatitis C?	Yes1 No2	→ 1001
901	Can Hepatitis C be transmitted through sex?	Yes1 No2 Don't know98	
902	Can Condoms protect you against hepatitis C?	Yes1 No2 Don't know98	
903	Can Hepatitis C only occur if you have HIV?	Yes1 No2 Don't know98	
904	Can Hepatitis C be transmitted by sharing needles?	Yes1 No2 Don't know98	

905	Can Hepatitis C be transmitted through tattooing?	Yes1 No2 Don't know98	
906	Is there a medical treatment for hepatitis C?	Yes1 No2 Don't know98	
907	Can herbal remedies cure hepatitis C?	Yes1 No2 Don't know98	

10. KNOWLEDGE AND PARTICIPATION IN STI AND HIV PROGRAMS

Q.N.	Question	CodingCategories	Skipto
1001	Have you met or discussed or interacted with Peer Educators (PE) or Outreach Educators (OE) or Community Mobilizers (CM) or	Yes.....1 No.....2	→ 1004
1002	What activities did these PE or OE involve you in when you met them? (Multiple answers. DONOT READ the possible answers)	Discussion on how HIV/AIDS is/isn't transmitted.....1 Discussion on how STI is/isn't transmitted.....2 Discussion on safe injecting behavior.....	

Q.N.	Question	CodingCategories	Skipto
1003	How many times have these PE, OE, CM and/or CE met you in the last 12 months?	Once1 2-3 times.....2 4-6 times.....3 7-12 times.....4 More than 12 times.....5	
1004	Have you visited or been to any outreach center (DIC, IC or CC) in the last 12 months? Drop-In Center (DIC), Information Center (IC), Co	Yes.....1 No.....2	→ 1008

1005	<p>What did you do when you went to the outreach center (DIC, ICorCC) in the 12 last months?</p> <p>(Multiple answers. DONOT READ the possible answers)</p>	<p>Went to collect condoms..... 1</p> <p>Went to learn the correct way of using condom..... 2</p> <p>Went to learn about the safe injecting behavior..... 3</p> <p>Went to watch film on HIV/AIDS.... 4</p> <p>Participated in discussion on HIV transmission..... 5</p> <p>Went to have new syringe..... 6</p> <p>Other (Specify)..... 6</p>	
1007	<p>How many times have you visited outreach centers (DIC, ICorCC) in the last 12 months?</p>	<p>Once..... 1</p> <p>2-3 times..... 2</p> <p>4-6 times..... 3</p> <p>7-12 times..... 4</p> <p>More than 12 times..... 5</p>	
1008	<p>Have you visited any STI clinic in the last 12 months?</p>	<p>Yes..... 1</p> <p>No..... 2</p>	→ 1011
1009	<p>What did you do when you visited such STI clinic?</p> <p>(Multiple answers. DONOT READ the possible answers given below)</p>	<p>Blood tested for STI..... 1</p> <p>Physical examination conducted for STI identification..... 2</p> <p>Discussion on how STI is/isn't transmitted..... 3</p> <p>Discussion on safe injecting behavior..... 4</p> <p>Regular/non-regular use of Condom..... 5</p> <p>Took a friend with me..... 6</p> <p>Other (Specify)..... 96</p>	
1010	<p>How many times have you visited STI clinic in the last 12 months?</p>	<p>Once..... 1</p> <p>2-3 times..... 2</p> <p>4-6 times..... 3</p> <p>7-12 times..... 4</p> <p>More than 12 times..... 5</p>	
1011	<p>Have you visited any HTC (HIV testing and counselling center)?</p> <p>Testing (VCT) centers in the last 12 months?</p>	<p>Yes..... 1</p> <p>No..... 2</p>	→ 1014

1012	What did you do when you visited such HTC? ? (Multiple answers. DONOT 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	
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Q.N.	Question	Coding Categories	Skipto
1013	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..... 5	
1013.1	Have you ever enrolled into any Opioid substitution Therapy (OST): Methadone and Buprenorphine?	Yes..... 1 No..... 2 Don't Know..... 98 No response 99	} 1014
1013.2	Have you received any Opioid substitution Therapy (OST) in the past 12 months?	Yes..... 1 No..... 2 Don't Know..... 98 No response 99	} 1014
1013.3	Which service have you received?	Methadone 1 Buprenorphine..... 2	
1013.4	Are you still in therapy?	Yes..... 1 No..... 2 Don't know..... 98 No response 99	} 1014
1013.5	What amount have you been receiving per day?	Methadone ml Or Buprenorphine mg.	

1013. 6	How long have you been in this therapy? Years Months	
1014	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 response99	1015
1014. 1	Do you know from where pregnant women can get PMTCT services?	Yes.....1 No.....2 Don't know.....98 No response99	1015
1015	Have you ever heard about anti-retroviral therapy (ART) services for HIV positive individuals?	Yes.....1 No.....2 Don't Know.....98 No response99	1016
1015. 1	Do you know from where HIV positive individuals can get ART services?	Yes..... ...1 No..... ...2 Don't know	1016
1016	Have you heard of viral load testing services for HIV positive individuals?	Yes.....1 No.....2 Don't know98 No response99	1017
1016. 1	Do you know from where HIV positive individuals can get viral load testing services?	Yes.....1 No.....2 Don't know98 No response99	1017
1017	Have you heard of any Community Home Based Care (CHBC) services that are provided for	Yes.....1 No.....2	

11. STIGMA AND DISCRIMINATION

Q.N.	Questio	Coding Categories	Skip
1101	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	
1102	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	
1103	If a member of your family gets HIV, would you want to keep it a secret?	Yes.....1 No.....2 Don't know.....98	

1104	If you knew a shopkeeper or food seller had HIV, would you buy food from him/her?	Yes.....1 No.....2 Don't know98 No response.....99	
1105	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 know98 No response.....99	
1106	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 know98 No response.....99	
1107	Do you think children living with HIV should be able to attend school with children who are HIV negative?	Yes.....1 No.....2 Don't know98 No response.....99	